TORCH / PLATFORM IRENE OIL SPILL

Draft Restoration Plan and Environmental Assessment

For Public Review and Comment

March 13, 2006

Prepared by:

Torch/Platform Irene Trustee Council:

United States Fish and Wildlife Service
California Department of Fish and Game
United States Department of Air Force, Vandenberg Air Force Base
California State Lands Commission

With Assistance From:

Santa Barbara County Planning and Development Department

COVER FACT SHEET	
Draft Restoration Plan and Environmental Assessment	
Co-Lead Trustee Agencies:	United States Fish and Wildlife Service California Department of Fish and Game, Office of Spill Prevention and Response
Cooperating Trustee Agencies:	United States Air Force, at Vandenberg Air Force Base California State Lands Commission
Abstract:	On 9/28/97, a discharge of at least 163 barrels of crude oil occurred from a rupture in a 20-inch offshore pipeline emanating from Platform Irene off the Santa Barbara County coast near Vandenberg Air Force Base. The Spill resulted in the fouling of approximately 17 miles of coastline, and caused an impact to a variety of natural resources, including seabirds, sandy and gravel beach habitats, rocky intertidal shoreline habitats, and use of beaches for human recreation. This plan identifies and evaluates restoration alternatives to compensate for natural resource losses due to the Spill. At this time, the Trustees are seeking comments from the public on the restoration alternatives described herein, which include seabird colony protection program, sandy beach and dune habitat restoration, mussel bed restoration, public education program, and boardwalk and an estuary viewing platform at Ocean Beach.
Contact Person:	Melissa Boggs-Blalack, Environmental Scientist, California Department of Fish and Game, Oil Spill Prevention and Response, 213 Beach Street, Morro Bay, California 93442. Phone: (805) 772-1756. E-mail: Mboggs@ospr.dfg.ca.gov. Fax:(805) 772-7569
Comments:	Comments are due no later than June 21, 2006. Comments should be sent to Melissa Boggs at the above address.
Copies:	Copies of the Torch/Platform Irene Draft Restoration Plan and Environmental Assessment are available on the California Department of Fish and Game website at: http://www.dfg.ca.gov/ospr/organizational/scientific/nrda/nrdairene.htm

EXECUTIVE SUMMARY

On September 28, 1997, a 20" transport pipeline connecting the Torch/Platform Irene (Torch) oil extraction platform to an onshore storage facility located in Santa Barbara County ruptured and the Torch/Platform Irene Oil Spill (hereafter the Spill) occurred. The pipeline was owned or operated by Torch Operating Company, Nuevo Energy Company, and Black Hawk Oil and Gas Company (collectively the Responsible Parties). The Spill released at least 163 barrels (or 6,846 gallons) of crude oil emulsion into the Pacific Ocean. Subsequent movement of the crude oil resulted in fouling of approximately 17 miles of northern Santa Barbara County coastline, causing impacts to a variety of natural resources, including seabirds, sandy and gravel beach habitats, rocky intertidal shoreline habitats, and lost use of beaches for human recreation.

Draft Restoration Plan and Environmental Assessment

This Draft Restoration Plan and Environmental Assessment (draft RP/EA) describes the effects of the Spill, and provides information regarding the affected environment, injuries to natural resources, and lost and diminished use of beaches and shoreline for human recreation as a result of the Spill. The intent of this process is to make the environment and public whole for injuries to natural resources and related services resulting from the discharge of oil. A proposed plan for restoration is presented in this document, which identifies and evaluates restoration alternatives to compensate for natural resource losses due to the Spill.

This document also serves as the federal Trustees' (the United States Fish and Wildlife Service (USFWS) and the United States Air Force, at Vandenberg Air Force Base (VAFB)) compliance with the National Environmental Policy Act (NEPA) in analyzing and selecting preferred restoration alternatives in the draft restoration plan. Subsequent NEPA compliance may be required prior to implementation of the restoration projects described herein pending development of further project-level detail. Additionally, this draft RP/EA and a subsequent Finding of No Significant Impact (FONSI), if issued, may be relied upon by the California State Trustees (the California Department of Fish and Game (CDFG) and the California State Lands Commission (CSLC)) or other California state or local agencies towards compliance with the California Environmental Quality Act (CEQA). CEQA compliance is required for discretionary projects that are authorized, funded or carried out by California state or local agencies.

Public Participation

The USFWS, VAFB, the CDFG, and the CSLC (collectively, the Trustees) conducted a public scoping process early in the restoration planning development process to solicit public input in identifying potential concerns and additional restoration alternatives. The Trustees prepared the October 20, 2004 Torch/Platform Irene Oil Spill Scoping

Document for Restoration Planning, which summarized preliminary restoration alternatives for the natural resources impacted by the Spill. The public was given an opportunity to review and comment on preliminary restoration alternatives and submit ideas of their own that they believed were more cost-effective, and that better met the objective of restoring resources inured by the Spill. The Trustees have considered the public comments received during the scoping process in the development of this draft RP/EA. The Trustees are now seeking comments from the public on the restoration alternatives described herein. Details of the public participation process are presented in Section 1.5 of this draft RP/EA.

Injured Resources

Studies and surveys conducted by the Trustees and other experts identified Spill-related injuries to the following natural resources and recreational services:

- Seabirds.
- Sandy and gravel beach habitats.
- Rocky intertidal shoreline habitats.
- Use of beaches for human recreation.

A detailed summary of the Spill injuries is presented in Section 3.0, Injury Assessment.

Compensatory Restoration Projects

The goal of this restoration process is to 1) identify and plan restoration projects that will compensate for injuries to, or lost use of, natural resources and related services resulting from the Spill, and 2) to propose restoration, rehabilitation, replacement, or acquisition of equivalent natural resources and services. After evaluating a number of restoration alternatives, and based upon public comments received during the scoping phase, the Trustees have identified the following five Most Preferred Restoration Alternatives as the proposed restoration actions:

1. *Seabird Colony Protection Program*. This project would protect seabirds by reducing human disturbance of roosts and colonies.
2. *Sandy Beach and Dune Habitat Restoration*. This project would eradicate invasive plant species and replant native vegetation more conducive to the propagation and survival of indigenous species.
3. *Mussel Bed Restoration.* This project would accelerate natural restoration along rocky intertidal areas.
4. *Public Education Program – Focus on Abalone and Rocky Intertidal Species.* This project was developed by combining educational elements from other proposed restoration alternatives.

5. *Boardwalk Ocean Park to Estuary -* This project would include a boardwalk from Ocean Beach Park into the estuary and an estuary viewing platform.

The above projects were ranked by the Trustees as the Most Preferred Restoration Alternatives based on established project selection criteria, detailed in Section 4.0. The reasons and considerations for the selection and relative rankings of projects are based on these criteria, including the threshold criteria of the relative nexus, or connection and relationship between natural resource injuries from the Spill and proposed restoration alternatives. Other restoration alternatives were considered, and are also discussed in Section 4.0.

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1.0 INTRODUCTION

This Draft Restoration Plan and Environmental Assessment (draft RP/EA) was prepared by the Torch/Platform Irene Oil Spill Natural Resources Trustee Council to inform the public about the affected environment and proposed restoration alternatives to compensate for natural resource injuries and lost recreational uses caused by the Torch/Platform Irene Oil Spill (hereafter Spill or Torch Spill). The Trustee Council is comprised of representatives of the U.S. Fish and Wildlife Service (USFWS); the United States Air Force, at Vandenberg Air Force Base (VAFB); the California Department of Fish and Game, Office of Spill Prevention and Response (CDFG); and the California State Lands Commission (CSLC), (collectively, the Trustees).

1.1 Background

On September 28, 1997, a discharge of crude oil occurred from a rupture in a 20-inch pipeline owned or operated by Torch Operating Company, Nuevo Energy Company, and Black Hawk Oil & Gas Company (collectively, the Responsible Parties). The pipeline runs from the offshore oil platform, Platform Irene, to a processing facility onshore north of the City of Lompoc, on Harris Grade Road in Santa Barbara County (see Figure 1). This pipeline transports an emulsion of crude oil and water from Platform Irene to the onshore facility.

At the time of the Spill, in addition to oil and production water, the pipeline contained approximately 900 gallons of diesel and 800 gallons of anti-corrosion chemical compounds. The Spill released at least 163 barrels (or 6,846 gallons) of the petroleum product into the Pacific Ocean. Subsequent movement of the petroleum resulted in fouling of approximately 17 miles of northern Santa Barbara County coastline, and caused impacts to a variety of natural resources. The degree of oiling varied along the affected coastline, with the most heavily oiled area being Surf Beach on VAFB.

1.2 Purpose of Draft RP/EA

The purpose of the draft RP/EA is to provide information regarding the affected environment, injured natural resources, and human recreational use impacts resulting from the Spill. This document also includes the Trustee agencies' plan for restoration, including descriptions and analyses of proposed restoration alternatives consistent with the Oil Pollution Act (OPA), 33 U.S.C. § 2701, *et seq.*, and the National Environmental Policy Act (NEPA), 40 U.S.C. § 4321, *et seq.*

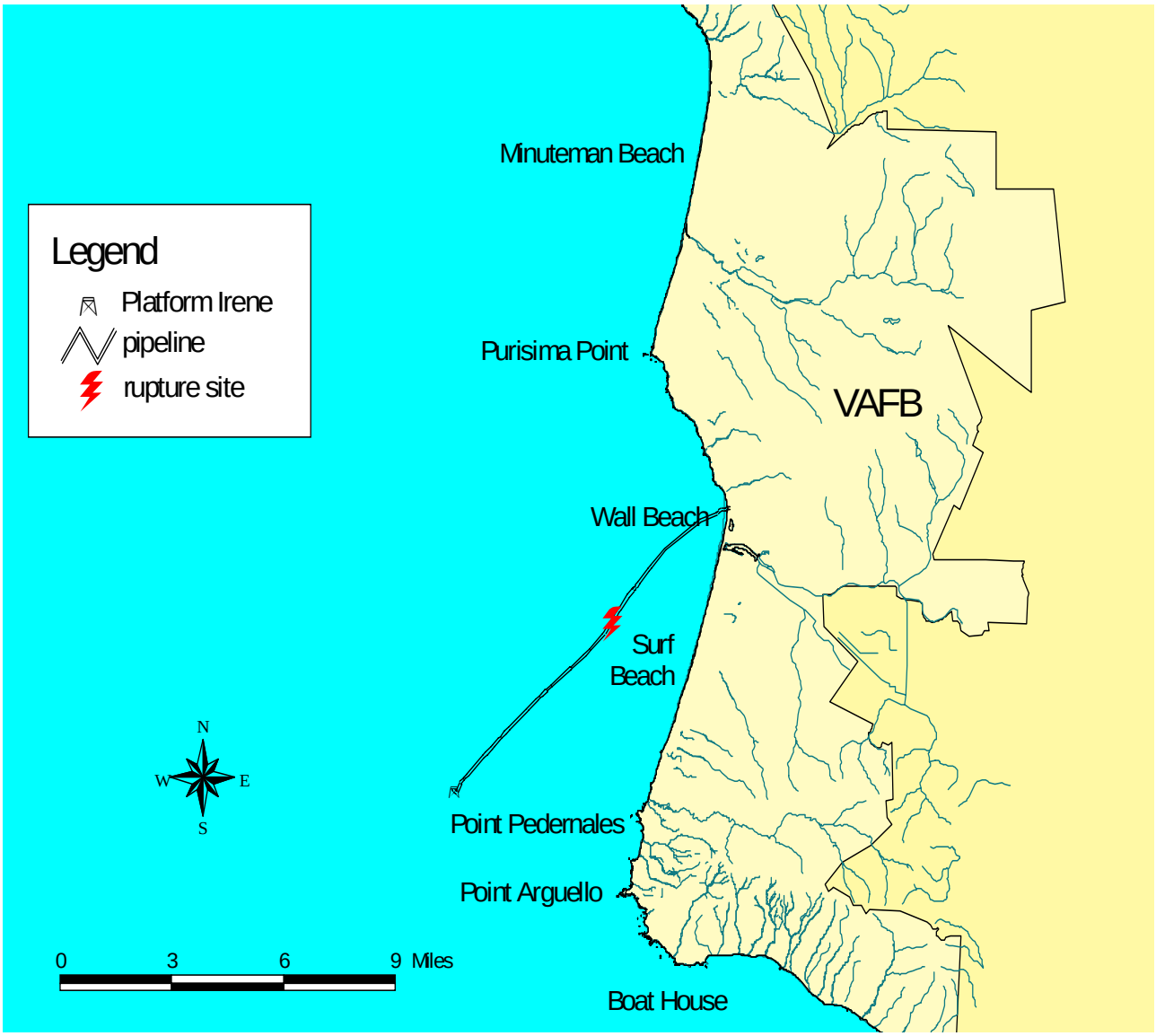

Figure 1. Platform Irene Oil Spill Location

During the restoration planning process, the Trustees identify and evaluate various alternatives, and provide the public an opportunity to review and comment on the selected restoration options. The goal of restoration is to compensate for injuries to, or lost use of, natural resources and services resulting from the Spill, and to propose restoration, rehabilitation, replacement, or acquisition of equivalent natural resources and services. The specific goals for this draft RP/EA are to restore the following natural resources affected by the Spill: seabirds, sandy and gravel beach habitats, rocky intertidal shoreline habitats, and use of beaches for human recreation.

This document also serves as the federal Trustees' compliance with NEPA for analyzing and selecting preferred restoration alternatives in the draft RP/EA. An Environmental Assessment (EA) is a concise public document that assists federal agencies in determining whether to prepare an environmental impact statement or a finding of no significant impact (FONSI) for a proposed action. This EA discusses the need for the Most Preferred Restoration Alternatives, environmental impacts of the Most Preferred Restoration Alternatives, alternatives to the Most Preferred Restoration Alternatives, and a listing of agencies and persons consulted.

The USFWS has prepared this EA in conjunction with publication of the Draft Restoration Plan which presents the restoration alternatives. However, subsequent NEPA compliance may be required prior to implementation of selected restoration projects upon further development of project-level detail. Additionally, other federal, state or local environmental laws, regulations or permitting requirements may be triggered in conjunction with specific project implementation. This draft RP/EA and subsequent FONSI, if issued, may be relied upon by the State Trustee agencies or other state or local agencies towards compliance with the California Environmental Quality Act (CEQA) as required for discretionary projects that are authorized, funded or carried out by California state or local agencies.

1.3 Natural Resources Trustees and Authorities

Both federal and California laws establish liability for natural resource damages, requiring responsible parties to make the environment and the public whole for the injury, destruction, and loss of natural resources and services resulting from oil spills. Natural resource damages include the reasonable cost of assessing resource injuries and lost services, along with the cost of developing and implementing a restoration plan to make the environment and the public whole for the injury to natural resources and compensate for lost or diminished resource services resulting from oil spills.

The USFWS, VAFB, the CDFG, and the CSLC are the Trustees for the natural resources injured by the Spill. The USFWS and VAFB are designated Trustees for natural resources pursuant to subpart G of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 C.F.R. § 300.600 et seq.), and Executive Order 12580 (52 Fed. Reg. 2923 (January 23, 1987)), as amended by Executive Order 12777 (56 Fed. Reg. 54757 (October 22, 1991)). The CDFG has state natural resource trustee authority pursuant to the California Fish and Game Code § 1802, and the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (California Government Code § 8670.1 et seq.); and the CSLC has state natural resource trustee authority pursuant to the California Public Resources Code § 6201 et seq. As designated Trustees, the agencies are authorized to act on behalf of the public under state and federal law to assess and recover natural resource damages and to plan and implement actions to restore, rehabilitate, replace, or acquire the equivalent of the affected natural resources

injured as a result of a discharge of oil. Pursuant to 15 C.F.R. § 990.14(a), the Trustees designated the CDFG and the USFWS as the Co-Lead Administrative Trustees. In addition, the Santa Barbara County Planning and Development Department assisted the Trustees during the assessment and evaluation of restoration alternatives.

The Trustees have jointly developed this draft RP/EA to address restoration of the injured resources. The Trustees released a Public Scoping Document on October 20, 2004, and held a Public Scoping Meeting on November 4, 2004, to assist in identifying potential restoration projects. The Trustees have considered all public comments received during the public scoping period in compiling this draft RP/EA. In all, the Trustees evaluated 18 proposed projects, 13 of which were proposed by the public. See Appendix A, public comments and project proposals submitted during scoping phase.

1.4 Settlement of Natural Resource Claims

The United States, (represented by the USFWS, VAFB, the United States Coast Guard, the National Pollution Funds Center, and the United States Environmental Protection Agency) and the state of California (represented by the CDFG, the CSLC, and the California Coastal Commission) reached a $3 million dollar settlement with the Responsible Parties for civil claims, including natural resource damages arising from the Spill. The terms of the settlement were memorialized in a Consent Decree, a written agreement, which was reviewed by a U.S. District Court and subject to public comment prior to being approved by the Court on July 25, 2002. The Consent Decree required the Responsible Parties to pay a total of $2,397,000 for natural resource damages. The money for natural resource damages, together with interest earned on the entire $3 million while held in escrow, was deposited into the Natural Resources Damage Assessment and Restoration Fund ("NRDAR Fund"), created pursuant to federal law (43 U.S.C. § 1474b). The Trustees have the authority and responsibility to use the funds in the Torch NRDAR account to restore natural resources in accordance with applicable laws and the consent decree.

The Trustees signed a Memorandum of Understanding (MOU) which created a Trustee Council comprised of agency representatives to ensure the coordination and cooperation among the Trustees during the restoration planning and implementation process.

The Trustees will allocate natural resource damage funds for restoration projects, roughly in proportion to the injured resources being restored. The MOU dictates the division of the $2,397,000 in damages for restoration projects as follows:

- Approximately $396,000 will be used for sandy shoreline and dune habitat projects which will also benefit western snowy plovers;

- Approximately $104,650 will be allocated for a project to benefit mussel beds and other rocky intertidal resources;
- Approximately $136,500 will be used for abalone projects;
- Approximately $1,193,833 will be used for projects benefiting seabirds, e.g. murres, cormorants, and pelicans;
- Approximately $65,520 will be used for human recreational beach use projects;
- An additional $100,497 may be allocated to some or all of the categories above; and
- Up to $400,000 may be used for Trustees' costs of complying with requirements of the law to conduct restoration planning and implementation.

In addition to the $2,397,000 for Natural Resource Damage Assessment claims, other components of the settlement included:

- $60,000 to the California Department of Fish and Game for civil penalties;
- $119,000 to the California Coastal Commission for California Coastal Act violations;
- $60,000 to the State Lands Commission for trespass damages;
- $25,000 to the USFWS for Endangered Species Act violations;
- $100,000 to the United States Department of Justice for civil penalties for Outer Continental Shelf Lands Act violations; and
- $179,300 to the United States Department of Justice for civil penalties for Clean Water Act violations.

The Trustees have committed to the expenditure of the natural resource damages for the design, implementation, permitting (as necessary), monitoring, and oversight of restoration projects.

1.5 Public Participation

The Trustees conducted a public scoping process early on in the restoration planning development process to solicit public input in identifying potential concerns and additional restoration alternatives. The Trustees prepared The October 20, 2004 Torch/Platform Irene Oil Spill Scoping Document for Restoration Planning, which summarized restoration alternatives for the natural resources impacted by the Spill. The public was given an opportunity to review and comment on preliminary restoration alternatives and submit project ideas of their own that they believed were more cost-effective, and that better met the objective of restoring resources injured by the Spill. In addition to releasing the Scoping Document for public review and comment, a public workshop was held November 4, 2004. Thirteen project concepts were submitted by the public during the scoping phase. These projects were evaluated and are included in this document. Additional comments received from the public during the scoping phase have also been considered in preparing this draft RP/EA. For details of comments and

project concepts received during the scoping phase see Appendix A. Additionally, Appendix B is the mailing list used to solicit public comment. In addition, public notice was placed in local newspapers and on Trustee Agency web pages.

The Trustees are now seeking written comments from the public on the restoration alternatives described herein. Public review of this draft RP/EA is an integral component of the restoration planning process. A public review period of at least 45 days is being provided for this draft RP/EA. This public review period closes on June 21, 2006. Comments must be received by that date to be considered part of the official record. Comments should be sent to the attention of Melissa Boggs-Blalack, Staff Environmental Scientist, California Department of Fish and Game, Oil Spill Prevention and Response, 213 Beach Street, Morro Bay, California 93442. Phone: (805) 772-1756. FAX: (805) 772-7569. E-mail: mboggs@ospr.dfg.ca.gov.

The Trustees will hold a public meeting at the Lompoc City Council Chambers at 100 Civic Center Plaza, Lompoc on April 19, 2006, 7:00 pm. At this meeting, the Trustees will present a brief overview of the draft RP/EA and accept public comment.

Public comments on this draft RP/EA will be incorporated into a final RP/EA which will be posted on the CDFG website cited below and included in the Administrative Record.

Further information and other activities of the Trustee Council will be distributed to those on our mailing list, and will be announced on our website at www.dfg.ca.gov/ospr/organization/scientific/nrda/NRDAirene.htm and through press releases. To be placed on the mailing list, please contact Melissa Boggs-Blalack at the address above.

1.6 Administrative Record

The Trustees have opened an Administrative Record (Record) in compliance with 15 C.F.R. § 990.45. The Record includes documents relied upon by the Trustees during the assessment and restoration planning performed in connection with the Spill. The Record is on file at the USFWS office located at 2493 Portola Road, Suite B, and Ventura CA. Arrangements may be made to review the Record by calling (805) 644-1766. Portions of the Record including this draft RR/EA and final RP/EA (when issued) may also be viewed at the following website: http://www.dfg.ca.gov/ospr/organizational/scientific/nrda/NRDAirene.htm.

2.0 AFFECTED ENVIRONMENT

A general understanding and awareness of the affected environment is important in evaluating the nature and extent of injuries resulting from the Spill relative to baseline conditions. Baseline, defined at 15 C.F.R. § 990.30 as “the condition of the natural

resources and services that would have existed had the incident not occurred," is used as a reference point in evaluating the restoration alternatives being considered. This section provides a brief overview of the physical and biological environment, threatened and endangered species, archeological and cultural resources, and land use including recreational services.

2.1 Physical and Biological Environment

As required by NEPA, this section presents a brief description of the physical and biological environments affected by the Torch Spill, and potentially affected by proposed restoration alternatives.

Physical Environment

The Spill site area is located along the south-central coast of California, approximately 275 miles south of San Francisco, 140 miles northwest of Los Angeles, 60 miles northwest of Santa Barbara, and six miles west of the City of Lompoc. The Spill occurred from a rupture in a 20-inch pipeline running from the offshore oil platform (Platform Irene), on the Outer Continental Shelf, to an onshore processing facility north of the City of Lompoc in Santa Barbara County.

At least 163 barrels (or 6,846 gallons) of petroleum products were released into the Pacific Ocean from the underwater pipeline. The Spill moved through approximately 120 feet of water column to the ocean surface. Subsequent movement of crude oil resulted in fouling of approximately 17 miles of northern Santa Barbara County coastline, impacting sandy beaches and rocky intertidal areas from Minuteman Beach to Boathouse Beach along the VAFB coastline (see Figure 1). Crude oil stranded on shorelines to the northeast, east, and southeast of the pipeline break. Estuaries at San Antonio Creek, Honda Creek, and the Santa Ynez River were also impacted.

The sandy beach and dune habitat ecosystems in San Luis Obispo and Santa Barbara Counties are considered to be among the richest in California in terms of species abundance and overall biomass (Dugan, *et al.* 1998). These beaches are typically broad sandy beaches, with dune formations behind them. Rocky intertidal shorelines are regionally limited, and occur primarily along the northern coastal areas of the Spill zone. Rocky intertidal habitats are highly productive and diverse environments within the lowest and highest tidal levels. The Santa Ynez River supports extensive wetland resources and endangered species habitat, and its estuary consists of salt marsh, mud flats, shallow tidal channels, and open water (County of Santa Barbara, 2000).

Biological Environment

Offshore, the region as a whole includes benthic communities (organisms that live on or in the sediment), fisheries, and seabird populations. In addition, at least one species of fissiped (the threatened southern Sea Otter, *Enhydra lutris)*, five species of pinniped (generally seals and sea lions) and 22 species of cetacean (generally whales, dolphins, and porpoises) migrate through or use the Point Conception region (County of Santa Barbara, 2000). At least one marine mammal (a dead California Sea Lion) was found oiled during the spill. Benthic communities are dominated by species of *Ophiuridea* (brittle stars) while epifauna (organisms that live on the surface of a substrate) are dominated by the starfish (*Petalaster foliolata*) and the sea pen (*Stylatula elongate*) at water depths in excess of 150 feet. Predominant groundfish species in the area include the specklefin midshipman (*Porichthys notatus*) and the Pacific sanddab (*Citharichthys sordidus*). Historic data from the Department of Fish and Game indicate that the Platform Irene area (DFG Fish Block 644) is not a significant commercial fishing area.

Sandy beach and dune habitat within the spill area could be characterized as ecologically productive with little degradation prior to the spill, with a healthy invertebrate population and associated vertebrate population. Common sand crabs (*Emerita analoga*), spiny sand crabs (*Blepharipoda occidentalis*), and Pismo clams (*Tivela stultorum*) were found in the intertidal zone, while flies, beach hoppers (*Megalorchestia sp.*), and isopods (*Alloniscus sp.*) frequented the wrack, e.g., seaweed accumulation line (Ricketts et al., 1985; Dugan, pers. comm.). This invertebrate population provides a foraging base for many species of birds (primarily gulls and shorebirds). Additionally, all sandy beaches at VAFB have been determined by the U.S. Fish and Wildlife Service and the Western Snowy Plover Recovery Team to be essential to the recovery of the threatened coastal population of the western snowy plover. Also, endangered California least terns nest in dunes at Purisima Point.

Rich rocky intertidal habitats support resident black abalone *(Haliotis Cracherodii)*, mussels and a wide variety of other organisms. Rocky intertidal habitats on VAFB are particularly rich due to their remoteness and geographic location. Shorebirds, including breeding black oystercatchers *(Haematopus palliates)* forage in this habitat.

The Santa Ynez River Mouth and VAFB shoreline is mentioned repeatedly in *The Birds of Santa Barbara County, California* (Lehman, 1994) as one of the best places to observe birds, especially listed species such as western snowy plovers (*Charadrius alexandrinus)* and California least terns (*Sterna antillarum*). Estuary habitat supports large concentrations of marine birds that use the lagoons for roosting and foraging. Several marsh dwelling birds depend on its large stands of tule for nesting. The endangered peregrine falcon, California brown pelicans, and California least terns are among the regular visitors to the Santa Ynez estuary. The Belding's savanna sparrow (state-endangered) are permanent residents of the coastal salt marsh at this location.

These sparrows resemble the subspecies *alaudinus*, not the state-endangered subspecies *beldingi*, in body type and plumage. The federally endangered tidewater goby also resides in the river estuary, and the endangered southern steelhead trout occurs in the estuary during migration.

2.2 Threatened and Endangered Species

The federal Endangered Species Act of 1973 (16 U.S.C. § 1531, *et seq.*) (ESA) and the California Endangered Species Act of 1970 (California Fish and Game Code § 2050 *et seq.*) direct the protection and conservation of listed endangered and threatened fishes, plants, and wildlife. The habitat of endangered, threatened and rare species takes on special importance because of these laws, and the protection and conservation of these species requires diligent management of their habitat. At least five state and/or federally listed bird species (western snowy plover, California least tern, California brown pelican, Belding's savanna sparrow, and American peregrine falcon) and one federally listed mammal species (southern sea otter) are found in the area affected by the Torch Spill.

Many rare plants such as surf thistle, Blochman's leafy daisy, beach layia, and salt marsh bird's beak are also found in the dune habitat in the Spill area. These plants are in danger of extinction because their habitats have been significantly reduced by development, military activities, alteration of natural fire cycles, and the invasion of alien plant species.

2.3 Archeological and Cultural Resources

More than 2,200 archaeological and historic sites have been identified on VAFB, most of which contain cultural artifacts of the Chumash Indians, who once occupied the land (Final Gaviota Coast Feasibility Study and Environmental Assessment, 2004). The area as a whole represents a cultural and scenic landscape and way of life that is becoming increasingly rare. Agricultural and ranching land use patterns dating from the Mission period (1760-1820) have not changed as much as other areas on the central and southern California coast. This landscape character can be linked to land use patterns established by the La Purisima Mission, Mission Santa Ynez, and the Santa Barbara Mission.

Historical resources include shipwrecks, wharves/landings, and marine-based land settlements. The receding coastline has submerged pre-historic and historic sites. Historic contact dates back to 1542 and the Spanish exploration by Juan Rodriguez Cabrillo. While many of the historic maritime sites may not be nationally significant, based on their individual attributes, the large concentration of resources connected to historical events along the coast makes it an important cultural area.

The area contains elements of the historic ranching land use pattern established by the Spanish and Mexicans during the Mission and Rancho Periods (1820-1845) that continued into the Americanization Period (1880-1915). It is considered one of the most outstanding – and last remaining - examples of an historic California coastal ranching landscape. The pastoral landscape of the area has remained largely intact due to stewardship of ranchers, farmers, and public land managers such as the U.S. Forest Service and VAFB. Many historic adobe buildings and ranch structures remain along the coast, some of which have retained their physical integrity. In addition, there are still remnants of the orchards planted during the Mission period.

2.4 Land Uses

The Central and Southern California coast is well known for its scenic rocky coastline, open sandy beaches, and picturesque coves. Because much of the Northern Santa Barbara County coast is undeveloped, many of these beaches have a remote, wild feeling to them. At the same time, there are several accessible public beaches at Surf Beach, Ocean Beach, and Jalama Beach Park which host a wide range of recreational activities including general beach use, hiking, fishing, surfing, camping, wildlife viewing, and other specialized uses.

Most of VAFB is not accessible to the public because of the nature of its military operations. However, under a Memorandum of Understanding (MOU) between the Department of Defense and Santa Barbara County, public access is available to five miles of Surf, Ocean, and Wall Beaches via access points at Surf Station and Ocean Beach County Park. Public access is reduced to a one-half mile area adjacent to Surf Station during the snowy plover nesting season (March 1 through September 30). Under the MOU, approximately one mile of the southernmost section of the VAFB coastline is also available for public access through Jalama Beach County Park.

VAFB operates as a missile test base and aerospace center, supporting west coast launch activities for the Air Force, Department of Defense, National Aeronautics and Space Administration, and commercial contractors. Vandenberg AFB is headquarters for the 30th Space Wing, the Air Force's Space Command unit that operates Vandenberg AFB and the Western Range. The Western Range begins at the coastal boundaries of Vandenberg and extends westward from the California coast to the Western Pacific including sites in Hawaii.

The Air Force does not currently have active missions within the area affected by the Spill except for periodic security clearance operations. However, all beach areas on VAFB are subject to periodic closures during launch operations due to safety and security requirements.

3.0 INJURY ASSESSMENT

Oil spill response includes injury assessment which involves determining the nature, extent, and severity of injuries to natural resources from a spill. This injury assessment data provides the technical basis for evaluating and scaling restoration actions. Regulations implementing the OPA define injury as "an observable or measurable adverse change in a natural resource or impairment of a natural resource service." 15 C.F.R. § 990.30. Diminution in the quantity or quality of the recreational use of natural resources also constitutes an injury as defined by the OPA regulations.

For each injured resource category, the Trustees selected appropriate assessment procedures based on (1) range of procedures available under section 990.27(b) of the OPA regulations; (2) time and cost necessary to implement the procedures; (3) potential nature, degree, and spatial and temporal extent of the injury; (4) potential restoration actions for the injury; (5) relevance and adequacy of information generated by the procedures to meet information requirements of planning appropriate restoration actions; and, (6) input from consultants with damage assessment experience, scientific experts, and/or technical consultants.

Each injury assessment focused on determining both the magnitude of the injury, such as the number of animals killed or area of habitat lost and the time to full recovery. This produces an estimate of direct, plus interim (from the time of injury until full recovery) loss of resources resulting from the oil. Injury estimates in future years were discounted at three percent per year (NOAA 1999).

Detailed descriptions and analyses of the injury assessments relied upon in this draft RP/EA are contained in the following separate injury reports located in the Record:

1) Final Report: Bird Injury Assessment for the Torch/Platform Irene Pipeline Oil Spill, September 1997. R.G. Ford Consulting Company, July 1998;
2) Preliminary Analysis of Injuries Abalone and Rocky Intertidal Habitat, Torch/Platform Irene Pipeline Oil Spill, September 20, 2005;
3) Public Beach Use Data Collection, November 18, 1997 and Trustees Estimate of Human Use Losses Resulting from Torch's Platform Irene Pipeline Spill;
4) Preliminary Injury Determination for Marine Mammals Torch/Platform Irene Pipeline Oil Spill, September 1997, Santa Barbara County, CA, October 9, 1998; and,
5) Monitoring of Rocky Intertidal Resources along the Central and Southern California Mainland, Part II Section 4.0: Torch Oil Spill, Peter T. Raimondi, Ph.D., October30, 1998.

The primary impacts from the Spill are 1) injuries to seabirds; 2) injuries to sand and gravel beach habitats; 3) injuries to rocky intertidal shoreline habitats; and 4) lost and

diminished use of beaches for human recreation. Summaries of each injury category are described below.

3.1 Seabird Resources

Exposure to oil can injure marine birds by two general mechanisms: 1) physical effects of oil on plumage and 2) toxic effects. A large proportion of the acute mortality caused by spills is due to physical oiling of birds which results in hypothermia and reduced ability to feed. Acute (short-term) mortality, as well as sublethal effects, can also result from toxicity after birds ingest or inhale oil. Chronic (long-term) effects of oiling likely include reduced reproduction and survivability.

It is estimated that between 635 and 815 seabirds and shorebirds were adversely impacted from the Spill. While some species, such as western snowy plovers, were impacted after the oil reached shore, many of the birds were oiled at sea. The majority of species impacted by the Spill do not breed in the area and originated from other geographic areas, occurring in the spill zone during migration. The Spill directly harmed western snowy plovers, which are listed as a threatened species, and California brown pelicans, which are listed as an endangered species. Seabirds whose populations are declining or flat in southern and central California were impacted by the spill including Brandt's cormorants and common murres. Spill impacts to these species negatively affect seabird conservation problems in California. Other impacted bird species included western grebe, rhinoceros auklet, pigeon guillemot, elegant tern, long-billed curlew, common loon, shearwaters, gulls, sanderlings, northern phalarope, and American coot.

Dead oiled birds were recovered as far south as Honda Cove, just north of Point Pedernales, and as far north as Morro Bay. Live oiled birds were observed as far southeast as Santa Barbara Harbor and as far north as Morro Bay. It is reasonable to assume that some live oiled birds, such as endangered brown pelicans, flew well beyond the area immediately affected by the Spill. Dead birds may also have drifted passively beyond the area since spill-affected seabird carcasses frequently persist longer than detectable quantities of oil (Ford *et al.* 1996).

During the Spill, shoreline and aerial surveys were conducted to locate and collect oiled birds and estimate the number and distribution of seabirds at risk. To estimate the total number of birds injured from the Spill, beach searches were conducted, scavenging rates (removal of bird carcasses by predators or scavengers) were estimated, and estimates were made regarding the numbers of birds beached along inaccessible segments of the coast. As noted above, between 635 and 815 seabirds and shorebirds are estimated to have been impacted by the Spill. This estimate includes 90 dead birds that were recovered, 32 birds that died in the rehabilitation center, and 18 birds that were rehabilitated and released. The total numbers of live and dead beached birds collected during the Spill are listed in Table 1 by species.

It is important to realize that following an oil spill, only a fraction of the birds injured are actually recovered. Birds may be lost at sea, scavenged at sea or on shore, missed by searchers, or live debilitated birds may fly out of the search area. Many birds die at sea and sink, and a few crawl into secluded spots on land. In addition, the likelihood of retrieving a carcass decreases with the decreasing body size (Carter *et al.* 2000). For example, deposition of murrelet carcasses on California beaches is unlikely because of low onshore transport, currents, at-sea carcass sinking, and scavenging (Ford *et al.* 1996). Finally, many of the animals recovered alive and subsequently cleaned at rescue centers do not survive the process, or have reduced chance of surviving once released to the wild (Sharpe 1996, Anderson *et al.* 1996).

Table 1 Summary of Spill Related Stranded Birds from Torch/Platform Irene Oil Spill

Species	**Collected Dead**	**Collected Live-died**	**Collected Live-Released**	***Total***
Red-throated Loon	1	1	0	2
Pacific Loon	1	0	0	1
Common Loon	0	1	0	1
Eared Grebe	0	1	2	3
Western Grebe	6	5	0	11
Brandt's Cormorant	34	1	1	36
Common Murre	28	21	0	49
Rhinoceros Auklet	1	0	0	1
Pigeon Guillemot	1	0	0	1
American Coot	1	0	0	1
Sooty Shearwater	2	0	0	2
Black-vented Shearwater	1	0	0	1
California Brown Pelican	0	0	2	2
Western Gull	3	0	7	10
Heermann's Gull	2	0	2	4
California Gull	1	0	2	3
Ring-billed Gull	1	0	0	1
Elegant Tern	0	1	0	1
Northern Phalarope	1	1	0	2
Sanderling	1	0	2	3
Unknown	5	0	0	5
Total	***90***	***32***	***18***	***140***

During the spill response, the Trustees conducted four survey types: 1) aerial surveys for resources at risk at sea; 2) beach surveys for oiled wildlife, resources at risk, and the collection of injured or dead specimens; 3) boat observations of pelicans; and 4) monitoring of snowy plover habitat at VAFB. The purpose of these surveys was not only to collect oiled wildlife, but also to identify resources that were potentially in the path of the oil, or wildlife that were oiled but still mobile. For more information on resources impacted by the Spill, see the Bird Injury Report, available as part of the administrative record (Final Report: Preliminary Bird Injury Assessment for the Torch/Platform Irene Oil Spill, Ford, R.G. 1998. September 1997).

3.2 Sand and Gravel Beach Habitats

The oil came ashore on sandy beaches and on rocky intertidal areas from Minuteman Beach to Boathouse Beach at VAFB impacting at least 17 miles of Santa Barbara County coast shoreline. The estuaries at San Antonio Creek, Honda Creek, and the Santa Ynez River were also impacted.

The sandy beach habitat within the spill area, due to limited public use over broad stretches of coastline, could be characterized as ecologically productive with little degradation prior to the spill, supporting healthy invertebrate (and associated vertebrate) species populations. After the Spill, the invertebrates on the beach, particularly the spiny sand crabs and the Pismo clams, likely suffered significant mortality due to smothering under blankets of oil and sand compression caused by heavy equipment from cleanup operations. In addition, due to removal of wrack during the course of cleanup, habitat and food sources for plants and invertebrates associated with the wrack line disappeared. A decrease in shorebird numbers, including the threatened western snowy plovers, appeared to be associated with both the injuries to the invertebrate populations and disturbances to its habitat.

Oiling of the sandy beaches consisted of variably sized ribbons of thick oil, as well as very large tar patties, up to three feet in diameter. The regions between the high and low tides were identified as being most heavily impacted. The beaches in this area are typically broad with dune formations behind them. Some stretches of beach had greater than 50% of their surface area visibly covered with oil. The tides moved the oil throughout the intertidal zone and along the coast. Cleanup actions removed much of the oil within the first few days, although the continuing presence of oil at some locations required the cleanup work to continue for almost six weeks.

3.3 Rocky Intertidal Shoreline Habitats

Rocky shores along the VAFB shoreline typically occur as horizontal or gently sloping platforms, and as rocky cliffs. There are extensive tracts of relatively undisturbed, highly productive, and diverse rocky intertidal habitat environments along the VAFB

coast. These habitats are characterized by a rich diversity of invertebrate species including black abalone (*Haliotis cracherodii*), seastars, turf alga *(Endocladia)*, rockweeds (*Pelentia*), barnacles, and mussels.

Rocky intertidal habitat was exposed to oil in many places along the shoreline. While levels of injury greater than 10 percent were not documented, it is expected that the oil exposure caused unquantifiable low levels of injury to a variety of rocky intertidal species including crustacea, mollusks, arthropods, and algae. Black abalone and mussel beds were observed to be coated with oil along or near the shores of VAFB, and at other nearby rocky shorelines. While abalone is monitored by the Minerals Management Service of the U.S. Department of the Interior (MMS) and Santa Barbara County at three sites within the Spill exposure zone, abalone losses from the Spill could not be evaluated in this separate analysis, as the data is confounded by the declines associated with Withering Foot Syndrome. Since 1992, Withering Foot Syndrome, a disease associated with warmer waters, has caused a marked decline in black abalone densities in the VAFB area. The additional stress associated with the Spill is expected to have exacerbated the decline and reduced chances for recovery.

3.4 Lost and Diminished Use of Beaches for Human Recreation

The Spill interrupted recreational services to individuals participating in beach-related activities along the Santa Barbara County coast. Specifically, the following beaches were impacted: Minuteman Beach, Purisima Point, Seal Beach, Wall Beach, Ocean Park, and Surf Station. Physical oiling of the beaches and subsequent cleanup activities impacted beach-related recreational services including walking, jogging, swimming, surfing, wildlife and tidepool viewing, fishing, and picnicking. Ocean Beach was closed to the public from September 29 through October 4. Additionally, many people avoided other impacted beaches due to the presence of tarballs and/or oil spill cleanup activities.

The basic approach to quantifying damages associated with lost recreational use is to estimate the number of lost user days of a specific activity and multiply that by the value per user day of that activity. The equation below describes this:

# of lost user days x value of a lost user day = total value of lost user days

Because these activities involve using publicly available resources and exact little cost on the user, there is no observable market price. One cannot see how much the user really values (*i.e.*, is really willing to pay for) the recreational activity. Thus, one cannot determine its true value to the user. Potential marginal costs (e.g., parking) and fixed costs associated with equipment (e.g., surfboards, wetsuits etc.) provide a lower bound on the value of the recreational activity. Because the individual made the decision to pursue the activity, the activity must be worth *at least* these costs. The pertinent

inquiry for the economist is not what does it cost to do this recreational activity, but what is the value of this activity to the users and what would they be willing to pay to do it.

A vast economic literature has emerged attempting to consider these factors and estimate the value of a recreational activity. For purposes of minimizing assessment costs, the Trustees relied on existing studies.

For quantification purposes, recreation activities were divided into two categories: general beach use and specialized beach use (e.g. surfing, surf fishing). For general beach use, the Trustees relied on previous recreational activity value estimates from Orange County, California (as used for the *American Trader* oil spill claim for damages associated with lost recreational use), adjusted for inflation to October 1997 dollars. This value is $18.55/user day.

There are no economic analyses specifically regarding the value of surfing or surf fishing. These specialized activities were estimated to be equal to 125% of general beach use (*i.e.*, $23.19/user day). Relative to estimates for other outdoor activities, this is a conservative figure.

The Trustees conducted surveys at Ocean Park and Surf Station in the weeks after the Spill, when the beach had re-opened. The results suggest that the Spill impacted recreational activities in two ways: 1) it precluded recreational activities altogether, resulting in lost use; and 2) it caused a loss of value to the activity, resulting in diminished use value. Lost use occurred both when the beach was closed, as well as afterward, when people still avoided the beach. Diminished use refers to a decrease in the value (or enjoyment) of the activity for those users that went ahead with their activity. Specifically, the Trustees concluded the following:

- September 29 - Oct 4: 100% of beach use was lost.
- October 5 – October 11: 50% of beach use was lost; the other 50% suffered diminished value.
- October 12 – October 30: no beach use was lost, but 100% suffered diminished value.

For diminished use, the Trustees assumed that the value of the trip was diminished by 20% (*i.e.*, $3.71/general beach use day and $4.64/specialized beach use day).

The Trustees also took into account differential attendance on weekends versus weekdays, as well as days when beach use would have been curtailed due to a Titan missile launch and restrictions to protect snowy plovers (2 days at Purisima Point).

The Trustees concluded that over 2,000 user days were lost as a result of the spill, and that over 7,000 user days suffered diminished value. The total loss in value to the public was estimated to be at least $65,000.

To develop potential projects to compensate for human use impacts, the Trustees collected restoration concepts from staff at the Santa Barbara County Planning and Development Department. These project concepts include beach access improvements through facilities construction and land acquisition.

4.0 RESTORATION PLANNING

4.1 Restoration Strategy

The goal of OPA is to make the environment and the public whole for injuries to natural resources and loss of services resulting from an oil spill. This goal is achieved through the return of the injured natural resources and services to baseline and compensation for interim losses of such natural resources and services from the date of the incident until recovery 15 C.F.R. § 990.10.

Restoration actions under the OPA regulations (15 C.F.R. Part 990) are either primary or compensatory. Generally, restoration is any action (or alternative), or combination of actions (or alternatives), to restore, rehabilitate, replace, or acquire the equivalent of injured natural resources. Primary restoration is any action, including natural recovery, which returns injured natural resources to baseline. Trustees must consider a natural recovery alternative in which no human intervention would be taken to directly restore injured natural resources and services to baseline. Trustees may select natural recovery under three conditions: 1) if feasible, 2) if cost-effective primary restoration is not available, or 3) if injured resources will recover quickly to baseline without human intervention. The Trustees must also consider an alternative comprised of active primary restoration actions to directly restore the natural resources and services to baseline on an accelerated timeframe. When identifying active primary restoration actions, Trustees may consider actions that prevent interference with restoration actions as well as more intensive actions expected to return injured natural resources and services to baseline faster or with greater certainty than with natural recovery.

Compensatory restoration is an action(s) taken to compensate for the interim loss of natural resources and/or services pending full recovery to baseline conditions. To the extent practicable, when evaluating compensatory restoration actions, the Trustees must first consider compensatory restoration actions that provide services of the same type and quality, and of comparable value, as those injured. If compensatory actions of the same type and quality and comparable value cannot provide a reasonable range of alternatives, the Trustees then consider other compensatory restoration actions that will provide services of at least comparable type and quality as those lost.

In considering restoration for injuries resulting from the Torch Spill, the Trustees first evaluated possible primary restoration for each injury. Based on that analysis, the Trustees determined that most injured natural resources would best recover to baseline conditions over time through natural recovery. Therefore, with the exception of the Mussel Bed Restoration Project which should enhance natural recovery, the Trustees' Most Preferred Restoration Alternatives are compensatory restoration for the natural resources and services injured from the Spill. For example, the Seabird Colony Enhancement Project will reduce human disturbance to seabirds and therefore, over time will compensate for impacts to seabirds from the Spill. In addition, given that natural recovery for many of the injured species may take many years, the proposed compensatory projects will contribute to primary restoration by aiding natural recovery for some species.

The Trustees considered 18 different restoration alternatives capable of providing compensatory restoration projects for injuries from the Torch Spill. Some of these alternatives were developed by the Trustees and presented in the scoping document; other ideas were provided to the Trustees by the public.

4.2 Criteria Used to Evaluate Restoration Alternatives

OPA and other applicable laws require the Trustees to use monies in the Torch Natural Resource Damage (NRD) Account for restoring, replacing, rehabilitating, and/or acquiring the equivalent of natural resources injured and services lost as a result of the Spill. The injuries and lost services from the Spill include injuries to seabirds, sandy beach habitats, rocky intertidal shoreline habitats, and lost and diminished use of beaches for human recreation. The Trustees considered a reasonable range of restoration alternatives before selecting their Most Preferred Restoration Alternatives. Each restoration alternative was comprised of compensatory restoration components that address one or more specific injuries associated with the Torch Spill.

The Trustees developed three categories of selection criteria: "Threshold," "Initial Screening," and "Additional Screening" criteria. The criteria used were developed from the OPA regulations and supplemental factors developed for this Spill. Restoration alternatives must achieve a minimum level of acceptance on the Threshold Criteria in order to receive further consideration under the Initial Screening and Additional Criteria. The Trustee Council used the evaluation criteria listed below to consider and prioritize all restoration alternatives, including alternatives that were proposed by the public. Within each criteria category (*i.e.*, Threshold, Initial Screening, and Additional Screening) the criteria are not prioritized.

4.2.1 Threshold Criteria

A project must meet the following threshold criteria in order to be further considered and evaluated using the Screening Criteria below. If any project does not meet the Threshold Criteria, it will not be given further consideration.

- *Consistency with Trustees' Restoration Goals* - Projects must meet the Trustees' intent to restore, rehabilitate, replace, enhance, or acquire the equivalent of the injured resources and resource services. In addition, projects must comply with applicable settlement documents.

- *Technical Feasibility* - Based on past experience or studies, the restoration projects must be technically and procedurally sound.

4.2.2 Initial Screening Criteria

The following initial screening criteria are used to determine preferred and non-preferred projects.

- *Relationship to Injured Resources and/or Services (nexus)* - Projects that restore rehabilitate, replace, enhance, or acquire the equivalent of the same or similar resources or services injured by the spill are preferred to projects that benefit other comparable resources or services. On-site and in-kind restoration projects are preferred but not required. Consider the types of resources or services injured by the spill, the location, and the connection or nexus of project benefits to those injured resources.

- *Avoidance of Adverse Impacts* - The project should avoid or minimize adverse impacts to the environment and the associated natural resources. Adverse impacts may be caused by collateral injuries when implementing, or as a result of implementing, the project.

- *Likelihood of Success* - Consider the potential for success and the level of expected return of resources and resource services. Consider also the ability to evaluate the success of the project, the ability to correct problems that arise during the course of the project, and the capability of individuals or organizations expected to implement the project.

- *Multiple Resource [and Service] Benefits* - Consider the extent to which the project benefits more than one natural resource or resource service. Measure in terms of the quantity and associated quality of the types of natural resources or service benefits expected to result from the project.

- *Time to Provide Benefits* - Consider the time it takes for benefits to be provided to the target ecosystem or public to minimize interim resource loss (sooner = better).

- *Duration of Benefits* - Consider the expected duration of benefits from the project. Long-term benefits are the objective.

4.2.3 Additional Screening Criteria

The following additional screening criteria are used to further evaluate and prioritize projects for funding and implementation. These additional criteria are not considered to be of lesser importance than the initial screening criteria. However, in practice it may be difficult to apply these criteria to project concepts. These criteria are generally more appropriately applied after detailed project plans and scopes of work are developed. If sufficient information is available, these criteria may also be used during the initial screening process.

- *Compliance with Applicable Federal, State, and Local Laws and Policies* - The project must comply with appropriate laws and policies.

- *Public Health and Safety* - The project must not pose a threat to public health and safety.

- *Protection of Project [Maintenance and Oversight]* - Consider the opportunities to protect the implemented project and resulting benefits over time through conservation easements, land acquisition, or other types of resource dedication. Long-term protection is preferable.

- *Opportunities for Collaboration* - Consider the possibility of matching funds, in-kind services, volunteer assistance, and coordination with other ongoing or proposed projects. External funding and support services that reduce costs or extend benefits are preferable. Funds, however, shall not be used to offset the costs of ongoing mitigation projects required pursuant to state or federal law.

- *Cost-Effectiveness* - Consider the relationship of expected project costs to expected resource and service benefits. Seek the least costly approach to deliver an equivalent or greater amount and type of benefits.

- *Total Cost and Accuracy of Estimate* - The total cost estimate should include costs to design, implement, monitor, and manage the project. Its validity is determined by the completeness, accuracy, and reliability of methods used to estimate costs, as well as the credibility of the person or entity submitting the estimate.

- *Comprehensive Range of Projects* - Consider the extent to which the project contributes to the more comprehensive restoration package. Evaluate the project for the degree to which it benefits any otherwise uncompensated spill injuries.

4.3 Environmental Assessment of the Most Preferred Restoration Alternatives

To reduce costs and avoid delays in restoration, the OPA regulations encourage Trustees to conduct the NEPA process concurrently with the development of the Restoration Plan. 15 C.F.R. § 990.23. To comply with the requirements of NEPA, the Trustees analyzed the effects of each of the Most Preferred Restoration Alternatives on the quality of the human environment. NEPA's implementing regulations direct federal agencies to evaluate the potential significance of proposed federal actions by considering both the context and the intensity of the action. 40 C.F.R. § 1508.27.

The appropriate context and area of potential significance for the restoration actions considered in this RP/EA is regional, as opposed to national or international. In the event any of the proposed restoration actions require additional refinements or adjustments to reflect site-specific conditions, further project-specific NEPA compliance may be needed once detailed implementation plans are developed. Also, other federal or state permitting requirements may be triggered. In addition, the cost estimates presented herein are the Trustees' best estimate at the time of this report, and may change to some degree upon implementation.

In accordance with the Consent Decree, the MOU, and OPA, expenditures from the Torch NRD Account are limited to restoring the injuries to seabirds, sand and gravel beach, rocky intertidal shoreline habitats, and lost and diminished use of beaches for human recreation.

To accomplish the goal of prioritizing restoration alternatives, the Trustees ranked restoration proposals into four categories based on screening criteria: Most Preferred, Moderately Preferred, Least Preferred, and Non-Preferred. The restoration planning and public scoping process (see Section 1.5 Public Participation) resulted in the identification of 5 Most Preferred (Table 2), 3 Moderately Preferred, 3 Least Preferred, and 8 Non-Preferred restoration alternatives (Table 3).

4.4 No Action Alternative

NEPA requires the Trustees to consider a "no action" alternative, and the OPA regulations require consideration of its equivalent for purposes of primary restoration, "the natural recovery option." Under the no action alternative, the Trustees would take no direct action to restore injured natural resources or compensate for lost services pending natural recovery. Instead, the Trustees would rely entirely on natural processes for recovery of the injured natural resources, and the Trustees would not seek any compensatory restoration.

The principal advantages of this approach are the ease of implementation and the absence of monetary costs because natural processes rather than humans determine the trajectory of recovery. However, while natural recovery would occur over time for most of the injured resources, the interim losses suffered would not be compensated under the no action alternative. OPA clearly establishes Trustee responsibility to seek compensation for interim losses pending recovery of natural resources. Losses were suffered from this Spill, and technically feasible, cost-effective alternatives exist to compensate for these losses.

4.5 Restoration Alternatives: Evaluation and Ranking

The following proposed projects were evaluated and ranked pursuant to the Threshold and Initial Screening Criteria detailed above in Section 4.2 and included in the October 20, 2004 Scoping Document (see Record). As the Trustees evaluated projects, the restoration alternatives had to achieve a minimum level of acceptance on the Threshold Criteria to receive further consideration under the Initial Screening Criteria. Projects were not evaluated using the Additional Screening Criteria because more detailed project plans and scopes of work need to be developed. The Trustees first individually ranked the proposed projects and then met as a group to discuss each project and qualitatively evaluate each project based upon the criteria and public comments received during the Scoping Phase. Based on this individual and then group review, by consensus, the Trustees ranked the projects as Preferred, Moderately Preferred, Least Preferred, and Non-Preferred. Below is a summary of the project rankings.

4.5.1 Most Preferred Restoration Alternatives

The Most Preferred Restoration Alternatives are the projects the Trustees are proposing to fund (*i.e.*, the proposed action) and are listed below in Table 2. Details of each project follow and include an evaluation of the project goals and nexus to the injury, project background, project description and methods, environmental consequences of the project, probability of success, performance criteria and monitoring, project evaluation, and budget. Additional project refinements (including more detailed budgets), and detailed scopes of work will likely be needed prior to project implementation.

Table 2 – Most Preferred Restoration Alternatives

Project Title
Seabird Colony Protection Program
Sandy Beach & Dune Habitat Restoration
Mussel Bed Restoration
Public Educational Program – Focus on Abalone & Other Rocky Intertidal Species
Boardwalk and Viewing Platform at Ocean Beach Park Estuary

4.5.1.1 Seabird Colony Enhancement Project

Goals and Nexus to Injury

The goal of this project is to restore injured seabird resources to pre-spill or baseline conditions, and to compensate for interim ecological losses pending full recovery. More specifically, the primary goal of the Seabird Colony Protection Program is to improve the survival of California's seabird species such as common murres, California brown pelicans, and cormorants by reducing human disturbances at their breeding and roosting colony sites. The nexus to the injury is that between 635 and 815 seabirds and shorebirds are estimated to have been adversely impacted from the Torch Spill.

Breeding seabird species, particularly those species that nest on cliffs or offshore rocks, are highly susceptible to human disturbances. The potential to harm or disturb breeding seabirds comes from various activities including but not limited to kayaking, boating, and flying planes and helicopters, fisheries operations, and water-based ecotourism such as diving and kayaking.

This Seabird Colony Enhancement Project will reduce disturbance to seabirds by implementing an educational program involving signs, buoys and outreach materials designed to educate users of the coast about the presence of nesting and roosting seabirds and ways to avoid disturbing these sensitive seabirds.

Background

It is estimated that between 635 and 815 seabirds and shorebirds were adversely impacted from the Torch Spill. While some species, such as western snowy plovers, were impacted after the oil reached shore, many of the birds were oiled at sea. The majority of seabird species impacted by the Spill do not breed in the impacted area; instead, they originated from other geographic areas, and were migrating through the

spill zone. A listing of impacted bird species is presented in Table 1. Spill impacts to these species exacerbate seabird conservation problems in California.

Sixteen species of seabirds breed along the central California coast, typically on offshore rocks and islands. California seabird nesting habitat occurs in areas characterized by complex ownerships and overlapping governmental jurisdictions. As a result of these ownership arrangements and jurisdictional relationships, no coordinated management and conservation program for seabirds currently exists in California. A few planning efforts are underway that address some aspects of California seabird conservation needs, but no one plan considers all the biological factors, status, regulatory issues, conservation threats, management needs, and restoration opportunities in one statewide document.

The Gulf of the Farallones National Marine Sanctuary (GFNMS) is implementing a Seabird Colony Protection Program in the area of Point Reyes south to Castle Rock/Hurricane Complex near Point Sur in Monterey County. This Torch seabird project will entail collaborating with the GFNMS program to extend the project area south into Santa Barbara County and the Channel Islands. Additional partners include, but are not necessarily limited to, the Monterey Bay National Marine Sanctuary (MBNMS), the Channel Islands National Marine Sanctuary, the USFWS, the California Department of Parks and Recreation, the California Coastal Conservancy, and the Bureau of Land Management (BLM) as part of the California Coastal National Monument (CCNM). BLM recently released the Resource Management Plan and Final Environmental Impact Statement for the California Coastal National Monument which identifies seabird conservation as a top priority.

The primary anthropogenic (man made) threats to seabirds in California are (not necessarily in order of severity): catastrophic oil spills, chronic oil pollution, conflicts with commercial fisheries, and disturbance to breeding colonies. Seabirds are disturbed by boats from the boat's movement, lights, engine noise, and human activity on board the boats including deploying and retrieving traps. Sport and commercial divers could pose similar threats. Aircraft disturbance to seabirds is also a problem. Helicopters in particular are known to flush seabirds. Recreational activities can also impact seabirds; for example, kayaking has resulted in people accessing coastal areas that were previously inaccessible.

These disturbances cause lower reproductive success through the direct loss of eggs and chicks as a result of being dislodged from the nesting site or being trampled by birds responding to the disturbance. Also, opportunistic predation occurs when adults are flushed leaving eggs and chicks unprotected. Disturbances also affect roosting sites.

Photo 1 – Kayakers recreating near a roosting bird colony.

Increased public awareness, coupled with coordinated management and strategic partnership, is necessary to effectively address the source of seabird disturbance. The GFNMS developed "A proposal to implement the Seabird Colony Protection Program" dated May 2005, which was submitted to the Command Trustee Council. The Command Trustee Council was formed after an oil spill that occurred in 1998 in San Francisco Bay and affected large numbers of seabirds. The Command project is mirrored after a similar successful project in Oregon to protect nesting seabirds at the Three Arches National Wildlife Refuge (Reimer and Brown 1997). The potential exists for the Sanctuaries, BLM, and the Trustee Councils to improve efficiencies and effectiveness by combining efforts, sharing experiences, and joining resources, which would also enhance the scope of seabird colony protection programs along the California coast.

Project Description and Methods

This project will entail collaborating with the GFNMS program to extend the project area south into Santa Barbara County and the Channel Islands. Project objectives include:

1. Developing and enforcing appropriate seabird colony protective measures;
2. Educating the public and specific user groups about protective measures; and
3. Monitoring and evaluating program effectiveness to ensure integration into long-term statewide seabird management programs.

This project will be implemented by the GFNMS or the MBNMS, or another partnering agency such as the BLM who manages the Coastal National Monument along the coast of California.

Managing human impacts on wildlife can be accomplished through a variety of activities. In order to do this effectively, a comprehensive program needs to be implemented, with planned strategies including monitoring, enforcement, education and outreach.

The project will include monitoring to better define the scope of disturbance problems and to provide a basis for comparison in future years. The project will also assess current education and outreach strategies, which will include identifying gaps and potential collaborators.

This project will address four primary types of disturbances: motorized vessels, non-motorized vessels, low flying aircraft and shoreside users. In addition, the project will include conducting general public education on seabird disturbance issues. The education and outreach strategies will target identified audiences for each type of disturbance. Developing partnerships with the target audience will be key to successful implementation of the project.

An educational program will be implemented involving habitat protection and disturbance reduction measures addressing excessive noise from aerial overflights, intrusive landings on islands and rocks, close approach of sensitive coastal areas by unauthorized boats and other watercraft, and close approach on foot, or by vehicle on land. The plan will incorporate outreach materials, presentations, signs and displays to educate shoreline visitors and recreational and commercial boat users about the presence of nesting and roosting seabirds and ways to avoid disturbing them. Outreach materials will be developed and presentations will be given to pilot associations and government agency pilots.

Specific measures may include, but are not necessarily limited to, positioning buoys around breeding rocks, posting signs, and developing educational programs targeting recreational users of the coast about the presence of nesting and roosting seabirds and ways to avoid disturbing these sensitive species. Outreach efforts to the Coast Guard, regulatory agencies, pilots, kayakers, and sport fishermen will also be conducted instructing them about the sensitive nature of seabird colonies and the importance of maintaining a specified distance from colonies during the breeding season.

The following is an overview of the target audience and tasks from the GFNMS Proposal. The GFMS project tasks below may be modified to address resource needs in the expanded project area south into Santa Barbara County:

Motorized Vessel Disturbance

Commercial and Recreational Fishing, Ecotourism, Motorized Boating

- Designate seabird protection zones around key colonies.
- Educate targeted audiences about protection zones.
- Design written graphics and/or outreach messages on anchor buoys.
- Develop and install signs at selected offshore rocks, sensitive coastal trails, and launch ramps.
- Educate sport fishing and ecotourism crews to ensure that boats maintain an appropriate distance from colonies.
- Advise fishermen about ways to reduce seabird disturbance including lights and hooking and entanglement conflicts.

Non-Motorized Vessel Disturbance

Personal Watercraft (kayaks, canoes, vessels under 20ft)

- Design and install signs or kiosks at coastal landing ramps to educate sport or commercial fishermen, kayakers and others about the sensitivity of nearby seabird colonies.
- Design and distribute brochures to marine supply and sporting goods stores.
- Develop and distribute posters, flyers and maps to individuals, marinas, recreational equipment stores, and recreational sport user clubs.
- Link wildlife disturbance reduction information to marinas, recreational equipment stores, and recreational sport user clubs web sites.
- Develop an exhibit and staff a table at recreational/sports shows.
- Develop a PowerPoint presentation for use at stores, club meetings, and schools.
- Develop on-the-water interpretive programs such as MBNMS's Team OCEAN.

Low Flying Aircraft Disturbance

Ultralight, Hang gliding, Small Plane Pilots, Military, Coast Guard

- Design and implement at least one workshop for the Federal Aviation Administration, the California Highway Patrol, U.S. Military and Coast Guard pilots, and other enforcement agencies to promote conformance with overflight restrictions prohibiting low altitude flights over protected marine areas. PowerPoint presentations and handouts will be developed.
- Ensure that aeronautical charts contain current information about altitude restrictions over sensitive colony sites.

- Develop and staff an exhibit and literature to be used at air shows.
- Educate organizers of annual events involving aircraft.
- Present information and distribute materials to ultralight, hang glider, and wind surfing clubs.

Shoreside Disturbance

Surfers, Divers, Beach Users

- Develop and conduct presentations about seabird conservation to community groups.
- Develop and implement programs and materials to promote public awareness.
- Develop a plan for signage at key locations.
- Provide seabird viewing opportunities at selected coastal vantage points.

General Education and Public Outreach

- Develop curricula for students.
- Develop informational materials for visitor's center.

The geographic area of this project extends beyond the immediate area impacted by the Spill because this project requires a regional approach in order to be successful. For example, pilots and boat captains from several airports and ports should be reached by the program. Additionally, the extent of the seabird injury cannot be addressed by a VAFB-specific or Lompoc-specific project alone. Although many of the seabirds that were impacted by the Torch Spill originated from colonies to the north, these species have not been targeted for restoration within this project. Common murres for example, (the bird species with the largest number impacted by the Spill), while experiencing serious problems in central California, are the focus of other programs currently underway. It is difficult to design a single project that benefits all seabird species affected by the Spill, particularly when many do not breed in the region. Birds that were impacted by the Spill that this project will likely benefit include California brown pelicans, Brandt's cormorants, double-crested cormorants, pigeon guillemot and gulls.

Environmental Consequences (Beneficial and Adverse)

Beneficial Effects

The actions implemented by this project will increase public awareness of seabird habitat requirements and educate the public about the potential impacts of seabird - human interactions. By educating the public in ways to safely observe seabirds while engaged in recreation, the Trustees can reduce the impacts of disturbance to nesting

populations of seabirds, thereby aiding in the recovery of these populations. Decreasing or eliminating these disturbances will likely have a direct beneficial impact on the reproductive output of these colonies.

Project benefits will include the following:

1. Increased public awareness of seabird habitat requirements.
2. Increased awareness of potential impacts of adverse human-seabird interactions.
3. Increased awareness of safe methods of observing seabirds while engaged in recreational activities.
4. Facilitating reduction of airplane and helicopter activity over sensitive seabird colonies.
5. Facilitating reduction of human disturbances that decrease reproductive output of nesting seabird populations.
6. Increased awareness of decision makers (such as federal, state and local agencies and management bodies) of the threat human disturbance poses on breeding seabird colonies and methods to reduce and eliminate human disturbance.
7. Protecting seabird habitat also provides collateral benefits to marine mammals such as harbor seals and California Sea Lions.

Potential Adverse Effects and Measures to Minimize or Avoid Adverse Impacts

Implementation of the Seabird Colony Enhancement Program is not expected to result in any significant adverse effects to the environment.

The Trustees will coordinate with implementing entities to ensure that any kiosks or signs, if installed, are carefully designed and placed so as not to detract from the natural aesthetics of the area. Additionally, structures will be placed in open well-traveled areas to maximize sign efficacy and to reduce the risk of vandalism.

While the restriction of recreational activities around sensitive areas may be perceived by some to limit the enjoyment and scope of the public's recreational experience, this restriction is expected to be minimal and will not significantly affect recreational opportunities. Moreover, the Trustee Council will carefully coordinate with implementing agencies to balance the goal of minimizing the impacts to seabird colony resources with preserving quality opportunities for recreation. Similarly, any restrictions that may impact fishermen are expected to be minimal given the small number of seabird colonies in the region and the limited nesting season. The proposed action emphasizes education and collaboration.

The Trustee Council does not expect that the proposed low-flying aircraft disturbance measures will significantly adversely affect the operations of the State Highway Patrol, U.S. Military, or other enforcement agencies. While law enforcement and military

organizations may be exempt from overflight restrictions, the goal of this proposed activity is to foster interagency coordination, to inform and educate state and federal law enforcement or military agencies regarding flight restrictions designed to protect sensitive resources, and to facilitate conformance to the extent practicable.

Probability of Success

The likelihood of success for this project is high. The project is likely to have a positive impact on breeding seabirds by reducing disturbance to nesting colonies and thereby decreasing the loss of chicks and eggs, which will lead to an increase in productivity. Improvements to communal roosts will have positive benefits to pelicans by reducing energy costs associated with commuting between prey and roosts, and with flushing and relocating due to human disturbance. Reducing energy expenditures should result in improved body condition of individual birds, which should lead to increased juvenile and adult survival, and increased reproductive success of pelicans and cormorants. This project will greatly aid the Trustees' actions to recover these species to pre-Spill levels.

As stated above, this project will be similar to existing programs developed in Oregon and California for protecting seabird colonies. The existing GFNMS Seabird Colony Protection Program will be used as a model and thus the foundation for the project has already been outlined. In Oregon, monitoring during the breeding season following the implementation of the disturbance reduction program (500 foot area closure during the breeding season) revealed a 39% reduction in disturbance events (Reimer and Brown 1997). Human disturbance to nesting and roosting areas is one of the major threats facing seabird populations in California.

Performance Criteria and Monitoring

To monitor the success of the restoration efforts, a combination of aerial and ground based surveys will be conducted for the duration of the project. Prior to the implementation of human disturbance reduction actions, monitoring will be undertaken at key colony and roost sites to better define the scope of disturbance problems and to provide a basis for comparison in future years. Monitoring of the colonies will be used to evaluate whether there has been a decrease in human caused adverse effects. Indices to document a decrease in human caused effects may include a decrease in observed flushing events by aircrafts and boats and increases in colony productivity and numbers of birds utilizing roosting areas. Public feedback and reaction will be the primary means of monitoring the success of educational activities.

In addition to monitoring the colonies, a summary of performance goals and measures follow from the GFNMS Seabird Colony Protection Program:

1. Increase seabird disturbance information exchange to key events/venues. Measure number of public venues attended/signs posted and number of individuals receiving information.
2. Increase awareness of organized users who impact nesting and breeding seabird colonies, including fishing association events, air shows, boat shows, and dive venues. Measure number of organizations contacted.
3. Increase central coast seabird protection coordination between agencies, non-governmental organizations, and interested public. Measure number of requests for information and number of places information is posted.
4. Increase the number of agencies, non-governmental organizations, and interested public reporting incidents of seabird disturbance. Measure number of recorded incidents.

Evaluation

The Trustees determined that this type and scale of project would provide appropriate compensation for many of the seabirds injured as a result of the Spill and have selected this project as a most preferred alternative. The treatment of cormorants and pelicans as both injured resources and as a surrogate species for other injured birds requires comparison of the Spill injuries to expected project benefits to be largely a qualitative assessment. This project has been designed and selected as a technically feasible and cost-effective restoration alternative based upon techniques and approaches that have proven successful in similar applications.

Furthermore, implementation of the Seabird Colony Enhancement Project is not expected to result in any significant effects to the environment when viewed in the context of the pertinent factors in NEPA, 40 C.F.R. § 1508.27. This project would have a beneficial impact on the environment through education and limitation on certain activities. This restoration alternative does not affect public health and safety. Although part of the project will occur in ecologically sensitive areas, this project consists of educating the public and decision makers, which has no adverse effect on these areas, and restricting use in order to protect the seabird colonies, has a beneficial effect on the environment. Because this project consists of educating the public about protecting seabirds the action will not adversely affect endangered or threatened species, or its critical habitat; but instead, will have only beneficial effects on listed species.

Budget

Per the Memorandum of Understanding between the Trustee Agencies, approximately $1.2 million has been allocated to projects benefiting seabirds. This project includes partnering with GFNMS Seabird Colony Protection Program and these funds may be used to supplement the one-time costs to establish the GFNMS Program and to expand

the project south, plus annual costs to implement and monitor the disturbance reduction efforts for five years.

Following the budget outlined for the GFNMS Seabird Colony Protection Program, below is a budget estimate for this project. A detailed budget and scope of work will be developed at a later date.

Bird colony observation and monitoring component for 5 years which includes personnel, aerial surveys, equipment, agency administrative support and overhead, and travel – estimated cost is $400,000.

Law enforcement component for 5 years based on a USFWS GS 11 Law Enforcement Agent salary (1/4 time) – estimated cost is $105,000.

Outreach and education component for 5 years which includes project management, signs, buoys, educational materials, other equipment, workboat charter, travel, administration and overhead – estimated cost is $695,000.

Total budget is $1,200,000.

4.5.1.2 Sandy Beach and Dune Habitat Restoration

Goals and Nexus to Injury

This project has two major elements:

1. Eradication of non-native European beach grass and iceplant through the selective use of herbicides and hand-treatment; and

2. Re-establishment of native vegetation (e.g., sand verbena, *Abronia spp.*), focusing on areas currently in non-native vegetation monoculture where native vegetation is not likely to re-establish naturally.

The objective of this project is to compensate for injuries to sandy shoreline habitat and to the federally threatened western snowy plover through removal of non-native vegetation in dune habitats, and replacement of native vegetation adjacent to affected beaches.

Background

The nature of sandy beaches makes direct restoration of this habitat difficult. Instead, the Trustees propose to restore natural resource services lost to the Spill through restoration of dune habitat immediately adjacent to impacted sandy beaches. Iceplant

(Carpobrotus spp.) and European beach grass *(Aimophila arenaria)* invasion and expansion have rendered large areas of dune habitat on VAFB and surrounding property unsuitable for nesting by snowy plovers. Proposed beach/dune habitat improvement projects include eradication of non-native vegetation that presently degrades natural habitat quality, and re-establishment of native vegetation, which will increase the capacity of the habitat to support nesting of the western snowy plover.

Photo 2 – Invasive species removal in the dunes.

Project Description and Methods

The proposed project area is located on Surf/Ocean Beach on VAFB. This beach extends approximately 3.5 miles south of the Santa Ynez River mouth. The area targeted for treatment is located on the northern end of the beach between the Santa Ynez River and the public beach access area adjacent to Surf Station. Dunes between the beach and the railroad tracks in this area are proposed for restoration (see Photo 3).

This project would be implemented by VAFB, the landowner with jurisdiction over the project area. This project would eradicate invasive plant species and replant native vegetation more conducive to the propagation and survival of indigenous species. The proposed restoration project seeks to remove key non-native plant species in the areas with the greatest potential for habitat improvements, thereby increasing suitable snowy plover nesting areas. The invasion and expansion of non-native vegetation, specifically iceplant (*Carpobrotus spp.*) and European beachgrass (*Ammophila arenaria*), across much of the beach and dune habitat has rendered large expanses of habitat unsuitable for nesting by snowy plovers, and has also reduced the available habitat for native plant species.

Photo 3 – Sandy Beach and Dune Habitat Restoration Area

The methods used to treat iceplant and European beach grass, restructure dunes, and revegetate dune habitat will be based on the *Final Plan for the Removal of Selected Invasive Plants from Western Snowy Plover Habitat at Vandenberg Air Force Base* (SRS Technologies 2005), hereinafter referred to as the Snowy Plover Habitat Restoration Plan. This plan was developed by VAFB, and approved by the USFWS, as a component of an overall Snowy Plover/Beach Management Plan. The USFWS analyzed the potential impacts, both beneficial and adverse, in the Biological Opinion for Beach Management for the Western Snowy Plover on Vandenberg Air Force Base (USFWS 2005). The goal of the habitat restoration plan is to increase the amount of quality breeding habitat on VAFB for snowy plovers, and to minimize impacts to the species. Manual, chemical, mechanical or a combination of the three treatments will be conducted between 1 October and 28 February to avoid disturbance of plovers during the breeding season.

Treatments consider alteration of topography and area of disturbance at different levels. Manual removal is recommended for small areas (less than 200 m^2 or 0.05 acres) where there is no need to alter dune structure mechanically, and where native plant species cover is equal to or greater than 40 percent of the total vegetative cover.

Manual treatment uses equipment such as trenching shovels, pitchforks, hand trowels and other tools. If dune structure needs alteration due to site-specific requirements, hand tools such as shovels and rakes would be used.

Chemical treatment would be used only on large areas with less than 40 percent of native plant cover. Glyphosate Roundup PRO Concentrate would be applied by a backpack sprayer or truck mounted hose sprayer using recommended concentrations of 4% for beachgrass and 1.2 to 1.6% for iceplant. Strict application protocols will be followed depending on site and weather conditions during active plant growth periods outside the plover nesting season.

Mechanical removal would be used in medium to large areas (between 0.05 acres to greater than 0.25 acres [200 m^2 to greater than 1000 m^2]), where substantial alteration of dune structure is necessary to restore the area to natural conditions. Heavy equipment would be used to excavate invasive plants and sand buildup that is not characteristic of plover breeding habitat. The excavated material will be sifted, screened, and disposed of as specified in VAFB's Snowy Plover Habitat Restoration Plan.

Any combination of the three treatments may be used. The most effective treatments will be determined from site-specific characteristics. A combination of treatments may be used during initial and follow-up treatments or follow-up treatments may differ from the initial treatment (SRS Technologies 2005).

Revegetation of treated areas will be with common and rare native plant species known to occur in the area. Plants used for revegetation include but are not limited to beach sand verbena (*Abronia maritima*), beach-bur (*Ambrosia chamissonis*), beach evening primrose (*Camissonia cheiranthifolia*), California and beach saltbush (*Atriplex californica* and *A. leucophylla*), and dandelion (*Malacothrix incana*). Seeds from native plant species, including rare or special status plants, would be collected onsite during the summer prior to restoration activities and propagated for planting during the winter after the first rains. Seeds from onsite vegetation are preferred over nursery stock to ensure the genetic integrity of the local plant community. Seed collection would be conducted outside snowy plover nesting areas, and close coordination with VAFB's snowy plover monitors would further ensure that nesting snowy plovers and their chicks would not be disturbed. Seed collection is the only component of this restoration project that would be conducted during nesting season, and this is driven by the necessity of collecting seed at the correct time when seeds are mature but have not yet dispersed.

Straw may also be used to immediately stabilize the dunes where necessary (SRS Technologies 2005). In some areas, re-seeding may be a less expensive option than propagation and outplanting of seedlings to expedite natural recolonization by native plant species.

Environmental Consequences (Beneficial and Adverse)

Beneficial Effects

This project will benefit the beach/dune ecosystem by eradicating non-native vegetation that presently degrades habitat quality, and will increase the capacity of the habitat to support the nesting of the federally-threatened western snowy plover. Iceplant and European beach grass invasion and expansion have rendered large areas of dune habitat in the area unsuitable for nesting by snowy plovers. This non-native vegetation also reduces available habitat for sensitive plant species such as surf thistle and the federally-endangered beach layia. Although this vegetation is not present on the lower beach areas that were oiled, non-native vegetation eradication and re-establishment of native vegetation have the potential to benefit the overall beach/dune ecosystem as well as the western snowy plover.

Potential Adverse Effects and Measures to Minimize or Avoid Adverse Impacts

Implementation of the Sandy Beach and Dune Habitat Restoration Project is not expected to result in any significant adverse effects to the human environment. The project will be implemented in compliance with the *Final Plan for the Removal of Selected Invasive Plants from Western Snowy Plover Habitat at Vandenberg Air Force Base* (SRS Technologies 2005), approved by the USFWS.

Non-native vegetation eradication projects use varying types and concentrations of herbicides, burning, and physical removal to eradicate invasive species. This proposed project would involve use of a glyphosphate herbicide and physical removal, when practicable, to remove invasive species and restore dune contours to a condition more closely resembling natural conditions. Burning is not planned for this project.

Although invasive species eradication will be conducted outside the plover nesting season, minor short-term impacts to snowy plovers are likely to occur. Plovers may be displaced and physically disturbed in response to equipment and work crew activities. However, no long-term adverse impacts would occur because of the large area of roosting and foraging habitat available to wintering snowy plovers on Surf and Wall Beach. Additionally, short-term disturbance would be minimized by monitoring conducted by a qualified snowy plover biologist.

While glyphosate is not expected to adversely affect wildlife, the herbicide can be toxic to aquatic species. However, application of the herbicide is not expected to adversely affect aquatic wildlife or aquatic habitats because chemical application near aquatic areas and areas with flowing water will be avoided. Further, wintering birds, including snowy plovers, would not likely be exposed to the herbicide because shorebirds and

seabirds in winter typically roost and forage on open beach areas rather than in vegetated dunes where herbicide applications would occur.

Minor short-term impacts may occur with unintentional native vegetation mortality of individuals closely associated with targeted, non-native vegetation eradication. Precautions will be taken to avoid disturbance to native vegetation during initial and follow-up treatments. Long-term adverse effects are not expected to native vegetation. Monitoring will determine the effects of eradication and revegetation techniques and the habitat quality for snowy plovers (See Performance Criteria and Monitoring Section).

No archeological sites are known to occur within the project area on Surf Beach. However, if extensive mechanical removal and dune restructuring is conducted, archaeological and cultural resource monitoring will be conducted as needed to ensure no adverse impacts occur to unanticipated cultural resource discoveries.

The human health risk is expected to be minimal. Routes of exposure to herbicide containing glyphosate include skin contact, eye contact, and inhalation. Temporary eye irritation may occur, but no significant adverse effects are expected with skin contact or inhalation when label instructions are followed. If ingestion occurs, water intake is recommended. Activities with manual and mechanical equipment may cause injury. Long-term or adverse effects are not anticipated with proper and careful use of maintained equipment. All restoration areas where ground disturbance would occur would be surveyed in advance by VAFB's Explosive Ordnance Disposal personnel.

Public access to Surf-Ocean Beach from both the Surf Station and Ocean Park access points would continue during restoration activities. No beach closures due to restoration activities are anticipated. Active work areas, including chemical application sites, would be fenced and signed, and only small areas of exclusion at any one time would be necessary. Revegetation sites will also be fenced and signed to minimize disturbance and enhance the probability of success.

Probability of Success

To evaluate success, an ongoing monitoring and maintenance program will ensure achievement of the 95% eradication goal and use of the project area by snowy plovers. The project monitoring will be conducted in conjunction with an existing snowy plover monitoring program at VAFB. Based on other invasive species removal projects in similar dune habitats, the probability of success is high. The probability of success is further enhanced by the site's proximity to existing high-quality nesting habitat near the Santa Ynez River.

Performance Criteria and Monitoring

A program to eradicate both beach grass and iceplant from the dunes, combined with native plant restoration would, if successful, result in the creation of significant areas suitable for native community populations. Monitoring throughout the life of the project will evaluate project success in terms of use of the areas by western snowy plovers, and the degree to which the project area will not be re-colonized by non-native vegetation.

The goal of eradication is to achieve 95 percent eradication of iceplant and beach grass over the project area, and successfully establish self-sustaining native vegetation cover over 15 percent of the same area (considered to be representative of natural conditions in healthy foredune habitat). Criteria for success must ultimately include annual goals as well as final standards that the program must meet.

Evaluation

Because of the difficulty in predicting subsequent use of the area by birds, no targets are identified for numbers of snowy plovers or other shorebirds using this habitat. However, based upon the large percentage of otherwise suitable habitat covered in beach grass, and the fact that snowy plovers presently nest on these beaches in significant numbers, use of restored habitat by western snowy plovers is anticipated. Ongoing project evaluation would be conducted in conjunction with an existing snowy plover monitoring program already underway at VAFB.

Furthermore, implementation of the Sandy Beach and Dune Habitat Restoration project is not expected to result in any significant effects to the human environment when viewed in the context of the pertinent factors in NEPA, 40 C.F.R. § 1508.27. This project would have a beneficial impact on the environment by enhancing the dune habitat adjacent to the affected sandy beaches. Non-native vegetation would be removed and native vegetation would be planted, increasing the capacity of this habitat to support nesting of the western snowy plover. This restoration alternative does not affect public health and safety. Fencing will surround active work areas. Although this project will occur in and near ecologically important and sensitive areas, this project will enhance the dune habitat adjacent to the impacted beaches to provide better habitat for nesting western snowy plovers, which has a beneficial effect on these areas. No archeological sites are known to occur in the area; if extensive mechanical removal and dune restructuring is conducted, archeological and cultural resource monitoring will be conducted as needed to ensure no adverse effects occur. Because this project consists of enhancing western snowy plover dune habitat, the action will have primarily beneficial effects on endangered or threatened species, and its critical habitat. Any effects on western snowy plovers due to equipment and work crew activities will be short-term because of other roosting and foraging habitat at Surf and Wall Beach.

Additionally, all activities will be monitored by a qualified snowy plover biologist. Adverse impacts to the western snowy plover will be temporary and are expected to be minor, and are outweighed by the beneficial effect of enhancing their habitat.

Budget

Per the Memorandum of Understanding between the Trustee Agencies, approximately $396,000 has been allocated to Sandy Beach and Dune Habitat Restoration. The funds will be spent on non-native plant eradication and native vegetation restoration. A general approximation for how these funds would be distributed among the different project elements is provided below. A detailed budget and project scope of work will be developed at a later date.

Beachgrass and iceplant eradication: initial treatment and follow-up treatment for four additional years: estimated cost is $280,000.

Native seed collection, seedling propagation and outplanting: estimated cost is $42,000.

Materials and Equipment: estimated cost is $15,000.

Snowy Plover monitoring: estimated cost is $48,000.

Archaeological monitoring during ground-disturbing activities: estimated cost is $11,000.

Total Budget is $396,000.

4.5.1.3 Mussel Bed Restoration

Goals and Nexus to Injury

Mussel beds are extremely important to the ecological health of rocky intertidal habitats. The goal of this project is to speed up the natural restoration process for injured mussel beds by seeding barren areas with adult mussels.

Oil covered rocky intertidal habitats, including mussel beds, were observed in many places along the shoreline during the Spill. While levels of injury greater than 10 percent were not documented, it is expected that the oil exposure caused unquantifiable, low levels of injury to a variety of rocky intertidal species including crustacea, mollusks, arthropods, and algae.

Seastars, in particular, and other rocky intertidal plants and animals found in mussel beds were injured by the Spill. Oiled seastars were documented in photos taken at

Point Arguello near the CDFG's abalone plots. As seastars are long-lived animals, and a keystone species, the loss of even a small percentage of adults will be felt in the population for many years. Since mussels are the primary food of seastars, maintaining a stable source of mussel provides direct benefits to seastars. Mussel beds also provide an important habitat for many other important intertidal species including barnacles, limpets, worms, snails, and varieties of algae. Restoring mussel beds to a healthy condition also provides collateral benefits to marine mammals such as sea otters.

Background

Mussel beds in northern Santa Barbara County and elsewhere in southern California have been declining for the past several years. The value of mussel beds in the coastal region is well documented. Mussel beds are one of the most diverse habitats in the world, and are relied upon by many marine animals as an important food source. When damaged, they may take as long as 15-20 years to recover fully. Many organisms depend on this stable habitat for their livelihood, including the diverse assemblage found within the mussel bed itself. Other animals such as birds, seastars, and sea otters also rely on mussels as an important food source. As the Spill impacted rocky intertidal habitats, including mussel beds, this project will seek to speed up the natural restoration process of these impacted mussel beds by seeding barren areas with adult mussels.

Project Description and Methods

The Minerals Management Service (MMS) will likely implement this project due to their experience in studying mussel beds in Northern and Central California for a number of years. Indications from MMS studies are that once a threshold of cover is reached in a plot, recovery rates increase. The goal of this restoration would be to accelerate the normal recovery time by starting with a 30% cover of mussels of the species *Mytilus californianus,* thereby shortening the recovery time. Three separate sites on VAFB in mussel beds known to be receding, including areas impacted by the Spill, will be identified for the project. Locations for study plots will also be established. Possible areas where rocky intertidal habitat is accessible are located south of Surf Beach on the southern side of Point Arguello, north of Wall Beach, and at Purisima Point. Within the three sites, a total of twelve fixed, one-meter square plots will be established along the perimeters of the mussel beds. The mussel beds will be "seeded" by laying small patches of adult mussels on the substrate. Burlap cloth will be bolted to the substrate to facilitate mussel adherence. Additionally, three one-meter square control plots will be established in healthy portions of the mussel beds, ideally in the same location, or as close to the injured beds as possible. It is projected that three patches of adult mussels (about a 4-5" square each) would be adequate to provide the requisite 30% cover. The burlap should disintegrate in about 3 weeks, at which time the mussels would have been able to put out sufficient byssal threads to stay secured to the substrate. Instead

of taking mussels from otherwise healthy beds, adult mussels will be collected from an offshore platform.

Within fixed plot areas, two different techniques will be used in order to enhance the success of the effort. Previous fieldwork indicated that the presence of some plants and animals are beneficial to mussel recruitment. However, it is not clear whether their presence accelerates the recovery in a plot where adult mussels are being added, or whether the presence of these other plants and animals increases competition for space. Therefore, two techniques will be used.

One technique involves removing undesirable plants (such as fleshy algae-like fucus) and animals to provide a clean substrate for the mussels to attach, and then transplanting the adult mussels. For this treatment, six one-meter plots would be cleared as described and transplanted with mussels to reach a 30% cover. Desirable plants such as coralline algae would be left in place as it is believed they encourage mussel recruitment.

The other technique involves removing undesirable plants/animals as in the first treatment. However, in this treatment, artificial substrate such as netting or air conditioner filters (thought to mimic properties of coralline algae) would be added to cleared surfaces to enhance recruitment. As in the first treatment, six one-meter plots would be treated, and then transplanted with adult mussels sufficient to reach a 30% cover in the plot.

Set up and transplanting of the plots would take place in mid- to late summer so that the mussels have time to acclimate to the local wave stresses before the winter storm season.

The transplanting will be phased, for example, one site will be started a year earlier than the others so that the information gathered from the setup and scraping procedures can be taken into account in setting up the remaining sites.

Weekly monitoring of the transplanted mussels would be required over the first month, replacing transplants as needed. Monthly monitoring would be needed over the next five months, with continued monitoring on a biannual basis for the next two years. Monitoring on an annual basis would be required for two additional years, unless the transplanted plots recover to healthy levels before that time.

Environmental Consequences (Beneficial and Adverse)

Beneficial Effects

Restoring mussel beds will provide wide-ranging benefits to a variety of individual species including barnacles, limpets, worms, snails, and varieties of algae. More importantly, the project will directly benefit a very important ecosystem. Since mussels are the primary food of seastars, maintaining a stable source of mussels provides direct benefits to seastars. Restoring mussel beds to a healthy condition also provides collateral benefits to marine mammals such as sea otters. Additionally, valuable data will be collected with the study design, using two different techniques, to determine if the presence of some plants and animals are beneficial to mussel recruitment or if their presence increases competition for space. This information will be helpful for other restoration efforts.

Potential Adverse Effects and Measures to Minimize or Avoid Adverse Impacts

Implementation of the mussel bed restoration project is not expected to result in any significant adverse effects to the environment. Collecting the mussels from the source locations could impact those source mussel beds. However, to ensure that the source locations are not significantly impacted, a minimum of 30% cover of mussels will be left at each source location. Additionally, instead of taking mussels from other healthy mussel beds along the coast, mussels will be collected from an offshore platform (a potential offshore platform source is Torch's Platform Irene).

Probability of Success

Based on previous studies, the probability of success of this project is high. As noted above, two different methods of transplanting mussels will be used to enhance the probability for success. One method will involve removing undesirable plants and animals to provide a clean substrate for the mussels to attach, and the other technique will involve removing undesirable plants/animals as in the first treatment but then adding and attaching an artificial substrate such as netting or air conditioner filters to cleared surfaces to enhance recruitment.

Additionally, by conducting the plot restorations in stages, several plots at a time, the information learned from the setup and scraping procedures could be taken into account in setting up the remaining sites.

Performance Criteria and Monitoring

Transplanted mussels will be monitored weekly for the first month, replacing transplants as needed. After the first month of weekly monitoring, monthly monitoring

will occur for five months, with continued monitoring on a biannual basis for two years. Monitoring on an annual basis would be required for two additional years, unless the transplanted plots recover to healthy levels before that time.

Evaluation

The Trustees determined that this type and scale of project would provide appropriate compensation for the impacts to the intertidal areas and specifically, to the mussel beds injured as a result of the Spill.

Furthermore, implementation of the Mussel Bed Restoration project is not expected to result in any significant effects to the environment when viewed in the context of the pertinent factors in NEPA, 40 C.F.R. § 1508.27. This project would have a beneficial impact on the environment by restoring impacted intertidal habitats by seeding barren mussel beds with adult mussels. Because this project consists of restoring intertidal habitats which would benefit mussels, seastars and sea otters, the action will not adversely affect endangered or threatened species, or its critical habitat; instead, it would have only beneficial effects. To reduce impact to source beds, adult mussels would be taken from an offshore platform rather than from mussel beds along the coast, and at least 30% of the mussel cover will be left at the source mussel bed. Any adverse effects from this project would be minimized and are outweighed by the beneficial impact of restoring impacted intertidal habitat.

Budget

Per the Memorandum of Understanding between the Trustee Agencies, approximately $100,000 has been allocated for the project benefiting mussels. This budget takes into account costs for project administration, necessary supplies and equipment, and the cost of obtaining the mussels. Labor costs associated with setup, transplants, and monitoring, data reduction, analysis, and reporting, along with related travel and per diem costs, are also included in this budget. A detailed project budget and scope of work will be developed at a later date.

4.5.1.4 Public Educational Program - Focus on Abalone and Other Rocky Intertidal Species

Goals and Nexus to Injury

The goal of this project is to provide local community outreach and education regarding the sensitivities of rocky intertidal habitats and to reduce the impacts from human disturbance on tidepools.

The rocky intertidal habitat along the VAFB coast is characterized by a rich diversity of invertebrate species, including black abalone (*Haliotis cracherodii*), sea stars, turf alga (*Endocladia*), rockweeds (*Pelvetia*), barnacles, and mussels. The VAFB coastline contains some extensive tracts of relatively undisturbed rocky intertidal habitat, as well as some of the largest black abalone (*Haliotis cracherodii*) concentrations in Santa Barbara County. The nexus between the spill and this project is that approximately 85 acres of rocky intertidal habitat was exposed to oil as a result of the Spill.

Background

Approximately 85 acres of rocky intertidal habitat was exposed to oil as a result of the incident. Based upon observations of black abalone covered with oil at Point Arguello, the pathway of oil on surface waters, the mixing of oil in the surf zone, as well as the projected slow recovery time for abalone, the Trustees estimate that black abalone resources suffered a 10-15% loss in the Spill area. Other rocky intertidal organisms likely suffered similar injuries due to exposure to oil from the Torch Spill.

During the Scoping Phase of this restoration planning process, the Trustees solicited comments on proposed projects and solicited new project ideas. Four comments included new proposed projects related to educating the public about abalone and rocky intertidal species. One project idea from the public included reducing legal take (reducing catch limits), limiting access to particular areas, increasing enforcement, and education. A second project idea from the public included constructing a boardwalk for beach access to Ocean and Surf Beach, and included erection of interpretive signs. A third project idea from the public was to construct an interpretive center at Ocean Park. The fourth project included funding for the Cabrillo High School Aquarium. Further details on these four proposed projects are included in the Moderately, Least, and Non-Preferred Project summaries below. Educational elements of these four projects were combined by the Trustees into this preferred alternative for the Rocky Intertidal Public Educational Program.

Tidepools and other components of rocky intertidal shores represent a species-rich habitat which attracts a wide array of visitors and collectors. Human disturbance of tidepool areas is of concern and includes trampling of the resources, turnover of rocks, displacement of both living and nonliving resources, and collecting of intertidal species or shells that can provide habitat. In addition to direct losses from trampling and collecting, secondary changes may result from changes in distribution, prey availability and competition. Under heavy use, patches of habitat become more frequently disturbed, allowing less time for recovery.

According to the MBNMS management plan, trampling in tidepools is defined as when animals are crushed or dislodged or algae are damaged. Disturbance may also occur if animals or substrates are not returned to the same location. Collecting is defined as

picking animals out of the intertidal area. Another source of visitor impacts to tidepools is the discarding of trash, which can remain for extended periods of time and become wedged in the substrate.

During the Spill, black abalone were observed to be coated with oil in several areas of the rocky intertidal habitat. Once the largest and arguably most important herbivore in intertidal systems along much of the west coast of the United States, the intertidal black abalone has experienced mass mortalities along the coast of California since the mid-1980s. As a declining species, the additional stress associated with the Spill likely exacerbated the decline and reduced the chances for recovery.

Black abalone species in central and southern California experienced stock collapse due to both natural and human-related causes, resulting in the 1997 closure of all abalone fishing in the area. The only abalone fishery currently open in the state is the northern California red abalone sport fishery. Mortality is due to infection by a pathogen that leads to a fatal wasting disease called "withering syndrome" where the foot of the abalone shrinks until it can no longer adhere to the substratum. Scientists first noted massive die-offs due to withering syndrome on the Channel Islands in 1986, and by 1992, it was observed near Point Conception on the mainland. The general pattern of mortality, once die-offs start, is that within a few months to a year the population will decrease by more than 90 percent, but a few remnant individuals will remain healthy and persist. Since the early 1990s the disease has migrated sequentially northwards along the California coast; this migration poses a potential threat to healthy populations of black abalone currently residing within the Monterey Bay National Marine Sanctuary. Black abalone are not a preferred species for commercial trade; hence restoration efforts to maintain their stocks and research efforts to combat withering syndrome have received little attention.

The prognosis for rapid natural recovery of black abalone populations along the southern and central coasts of California is not good. Black abalone along the central and into the northern coast of California already show signs of withering syndrome, therefore mass mortalities throughout the Sanctuary are likely. In 1999, the National Marine Fisheries Service (NMFS) listed *Haliotis cracherodii* as a candidate species for protection under the ESA.

Restoring populations of slow-growing, long-lived abalone to levels that can sustain productive fisheries will take decades and will require active intervention. Closing the Orange County shoreline to abalone harvest in 1977 and waiting 15 years for populations to recover spontaneously was ineffective (Tegner 1992). Abalone are not unusual in this respect. Recent analysis of 128 marine fish stocks revealed that only three species might be able to recover spontaneously from severe harvest-induced reductions (Meyers *et al.* 1995). Active brood-stock husbandry now seems to offer the only promising abalone restoration approach (Tegner 1992, 1993). However, black

abalone have not yet been successfully cultured. Culture programs for black abalone are important to develop a source of stock for out-planting, and to answer questions about withering syndrome.

The black abalone is a candidate for listing under the ESA. Without human intervention, and possibly even with it, this species may never recover. The recovery portion of the California Department of Fish and Game's Abalone Recovery and Management Plan (ARMP), is directed at preventing further population declines and helping rebuild populations (CDFG, 2002). Formal comprehensive plans have not yet been made to restore the productivity of California abalone populations. Limited research on recruitment dynamics, larval and juvenile stocking feasibility, and brood-stock husbandry are under way (Davis and Haaker 1995). For the recovery portion of the ARMP, the interim goals are to reverse declines in populations by stabilizing stocks (prevent extinction in California waters), and establish self-sustaining populations range-wide. The long-term goal is to attain resource levels that can sustain a fishery.

Project Description and Methods

Project components include 1) educational outreach to minimize human impacts on tide pools, 2) collaboration, and 3) monitoring. A detailed project budget and scope of work will be developed at a later date.

This project will likely be implemented by an organization that focuses on educating the community on environmental issues. The goal of this project is to enhance public awareness of the sensitivities of tidepools and the species that inhabit the intertidal community including black abalone, to reduce the human impacts on this sensitive habitat type. The target audience will be the Santa Barbara County community and visitors to the area's beaches. This project will also include a monitoring component to evaluate visitor use patterns and resource impacts at select high use rocky intertidal locations in Santa Barbara County such as Jalama Beach.

Components of a good public awareness/educational outreach program may include, but are not necessarily limited to:

- Posting interpretive signs regarding the importance of protecting intertidal species including black abalone by providing information about tidepool etiquette;
- Identifying and coordinating regulatory agencies, stakeholders, and partners;
- Posting signs with information on how to report crimes and resource injuries, (e.g., the CalTip program has been very helpful with enforcement efforts related to abalone);
- Developing and disseminating readily understandable information about regulations;

- Developing publications and other outreach materials;
- Fostering interagency coordination;
- Educating constituents about regulations that protect recovering and managed black abalone stocks;
- Conducting public awareness campaigns about the vulnerability of our intertidal and subtidal marine resources;
- Providing the public with descriptions of anthropogenic threats to black abalone and intertidal species, such as describing the adverse impacts of picking up live abalone and other intertidal organisms ("look don't touch");
- Preventing pollution, dumping, runoff, and other factors negatively impacting marine resources;
- Educating students at schools, and creating educational videos and internet website interactive games and activities;
- Exploring the potential for hands-on exhibits or live display tables;
- Developing multicultural educational elements;
- Enlisting the participation of community groups, fishermen, and coast watch groups that maintain some form of stewardship to closely observe local fishing activities to discourage poaching;
- Emphasizing the importance of good stewardship; and
- Developing and distributing ecological fact sheets.

The project will include collaborating with other organizations and agencies, and researching similar efforts that are taking place in other areas, such as the MBNMS, to use as a guide. Potential collaborators include, but are not necessarily limited to, the CDFG, the California Department of Parks and Recreation, the MMS, the U.C. Santa Barbara, the Hancock Community College, the Discovery Center in Santa Maria, the Santa Barbara Museum of Natural History, the Cabrillo High School Aquarium, and the Sea Center on the Santa Barbara pier.

The project will also involve evaluation of visitor use patterns by monitoring locations, amounts of visits, and types of visitor uses as well as resource impacts. The monitoring may also include field monitoring of intertidal organisms to evaluate species abundance, distribution patterns, and other factors at sites in an attempt to distinguish visitor impacts from other factors that may influence tidepools.

Environmental Consequences (Beneficial and Adverse)

Beneficial Effects

The actions implemented by this project will increase public awareness of the issues associated with a declining black abalone population, and the importance of ecosystem integrity of intertidal species. Seaside postings, educational materials, and kiosk information will likely impact and raise the awareness level of not only the beach

visitors, but is likely to extend to local residents and community organizations and agencies.

Potential Adverse Effects and Measures to Minimize or Avoid Adverse Impacts

Implementation of this public educational program is not expected to result in any significant adverse effects to the environment.

Trustees will coordinate with implementing entities to ensure that any kiosks or signs (if used) will be carefully designed and placed so as not to detract from the natural aesthetics of the area and to ensure that structures will be placed in open well-traveled areas to maximize sign efficacy and to reduce the risk of vandalism.

The program will not result in any significant restriction on recreational opportunities. The purpose of the project is to educate, not to restrict access. In implementing this educational program, a balance will be sought between minimizing the impacts on the resource, and preserving quality opportunities for recreation.

Probability of Success

The probability of success is high. Similar efforts have been undertaken successfully at other areas such as the MBNMS.

Performance Criteria and Monitoring

Public feedback will be the primary means of monitoring the success of the educational activities. Additionally, types of visitor uses, locations visited, and visitor use patterns will be evaluated, including evaluating level of awareness of tidepool etiquette. Effects on the biological resources will also be evaluated, such as evaluating species abundance and distribution at sites that differ in their levels of visitor use.

Evaluation

The Trustees have evaluated this project against all threshold and initial screening criteria developed to select restoration projects and concluded that this project is consistent with the selection factors. The Trustees have determined that this type and scale of project would provide appropriate compensation for injuries to black abalone in the area.

Implementation of this project should result in major positive benefits to the beach-goers experience. As noted above, public feedback and the amount of reaction expressed by beach visitors will be one way to evaluate the effectiveness of this outreach program.

Furthermore, implementation of the Public Educational Program – Focus on Abalone and Other Rocky Intertidal Species is not expected to result in any significant effects to the environment when viewed in the context of the pertinent factors in NEPA, 40 C.F.R. § 1508.27. This project would have a beneficial impact on the environment through public education about the sensitivities of tidepools and the species that inhabit these intertidal communities, such as the black abalone. Additionally, the action will not adversely affect endangered or threatened species, or its critical habitat.

Budget

Per the Memorandum of Understanding between the Trustee Agencies, approximately $136,500 was allocated for a project to benefit abalone. This project will benefit abalone as well as other rocky intertidal species and the funds will be used for designing and distributing educational interpretive materials, collaborating with other agencies and organizations, and monitoring.

4.5.1.5 Boardwalk and Viewing Platform at Ocean Beach Park Estuary

Goals and Nexus to Injury

Based upon the restoration project selection criteria, the Most Preferred Restoration Alternative in the category of "Lost and Diminished Use of Beaches for Human Recreation" is the Boardwalk and Viewing Platform at the Ocean Beach Park Estuary. This restoration alternative focuses on improvements to the Ocean Beach facilities, which was one of the primary recreational beach areas that was most heavily impacted by the Torch Spill.

To develop potential projects that could be implemented to compensate for human use impacts, the Trustees collected restoration concepts from the public and staff at the Santa Barbara County Planning and Development Department. Ideas included a variety of projects from facilities improvement construction to property acquisition. These projects focused on improving visitor experience and enhancing the quality and amount of public use at those areas that were most heavily impacted by the Spill. Seven projects were proposed to compensate for lost and diminished use of beaches for human recreation:

- Boardwalk and Viewing Platform at Ocean Beach Park Estuary;
- Coastal Access Boardwalk from Ocean Beach Park to the beach;
- Coastal Access Boardwalk from Surf Station to the beach;
- Dune Boardwalk connecting Ocean Beach Park and Surf Station;
- Ocean Beach Host Site and Interpretive Signage;
- Point Sal Property Improvement; and
- Point Sal Land Acquisition.

The first project, Boardwalk and Viewing Platform at Ocean Beach Park Estuary, is a most preferred alternative project and is detailed below. The remaining six recreation project proposals are briefly discussed in Section 4.7 Moderately, Least, and Non-Preferred Alternatives.

Background

Ocean Beach Park is a 40-acre park owned and operated by Santa Barbara County. The park provides coastal access to the public, particularly the 65,000 residents of the Lompoc Valley. Visitor serving facilities at the park include picnic tables, ADA-accessible bathrooms, a small marine-themed playground, and a safe ADA-accessible ramp under the railroad tracks to the beach. Since 2000, access to the beach has been prohibited from March 1 through September 30 to protect nesting western snowy plovers.

Ocean Beach Park was closed for four days due to the Spill. The beach was oiled and heavy equipment and cleanup activities disrupted public recreational activities at the park. In addition, negative publicity about the spill and beach conditions, and uncertainty about whether the beach had re-opened reduced usage of the beach for several weeks beyond the time period of the actual beach closure. Phase I of the project (to be funded from another source) will involve constructing a boardwalk along the northern and eastern perimeter of the existing parking lot during 2005 and 2006. Phase II of the project (to be funded from the Torch Trust funds) includes construction of a boardwalk into the Santa Ynez River estuary and will include a platform for wildlife/habitat viewing, and will connect with the Phase I boardwalk.

Project Description and Methods

The Most Preferred Restoration Alternative is the construction of a boardwalk and nature viewing platform into the Santa Ynez River estuary. The boardwalk will provide educational and interpretive services to park visitors, with direct access to the estuary for improved wildlife viewing. During periods of time when the beach is closed, the boardwalk will provide an alternative high quality, ADA-accessible recreational experience. The proposed project location is on the northeast end of the parking lot at Ocean Beach Park (see figure 2). This project has been part of the County's approved Master Plan for Ocean Beach Park since 1988 and, as such, is consistent with the County's applicable land use controls. The boardwalk will be constructed and managed under the direction of Santa Barbara County's Parks Department.

This project, Phase II, involves construction of a wooden boardwalk at low elevation extending for approximately 215 feet northeast from the Ocean Beach parking lot into the estuary of the Santa Ynez River (see Figure 3, Boardwalk Site Plan from Ocean Beach Park Master Plan).

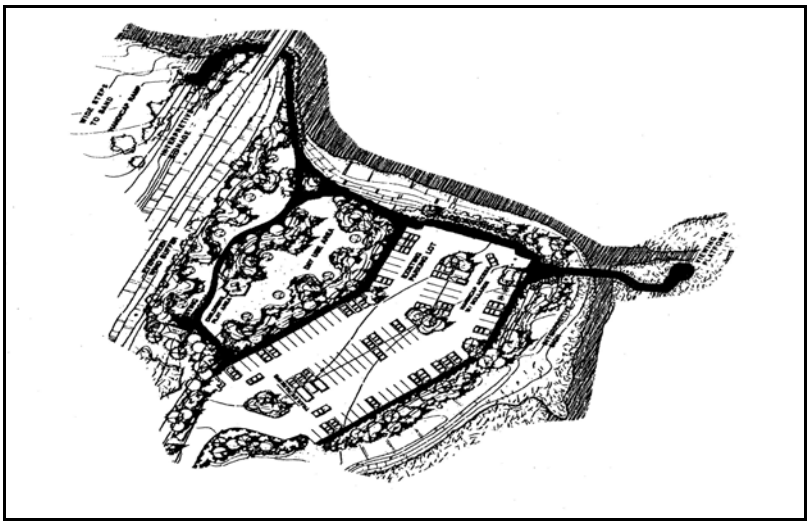

Figure 2, Ocean Beach Park Master Plan, showing proposed boardwalk extending to the right (east) from the parking lot.

As part of a different project, Phase I, planned for 2005-2006, an interpretive/educational kiosk will be constructed at the parking lot end of the boardwalk to provide information relating to environmental concerns, seabird identification, and natural habitats. As part of the Phase II boardwalk project, a viewing platform with seating and low interpretive panels will be constructed at the far end of the boardwalk over the estuary, to encourage visitors to enjoy the view. Care will be taken to assure that construction design and materials would focus on minimizing any adverse impacts to the wetland habitat. Implementation of this project would likely require permits from the Army Corps of Engineers, the California Coastal Commission, and the Regional Water Quality Control Board. Also, the County of Santa Barbara intends to utilize this EA and subsequent FONSI (if issued) to provide project-specific compliance with the California Environmental Quality Act. The interpretive panels would contain information regarding the wetland habitat and the sensitive species such as listed plants, savannah sparrows, tidewater gobies, and steelhead trout.

For this project, Phase II, the boardwalk would be constructed on wooden or concrete piles. Two piles would be set every 12 - 16 feet, one on each side, for a total of 24 piles. The piles would be 12 inches in diameter, resulting in a total surface disturbance of approximately 75 square feet, or 0.00173 acres. The boardwalk deck would be constructed on horizontal supports (stringers) supported by the piles. The decking of the boardwalk would be approximately ten feet wide, and would be constructed approximately seven feet above the wetland vegetation (see Figure 4, Boardwalk Elevation and Photo 4, Boardwalk Location). The boardwalk's total footprint would be 2150 square feet, or 0.05 acres. The boardwalk's handrails would be located above the 10-year flood water level as may be required by Flood Control to reduce damage to the boardwalk during peak storm flows.

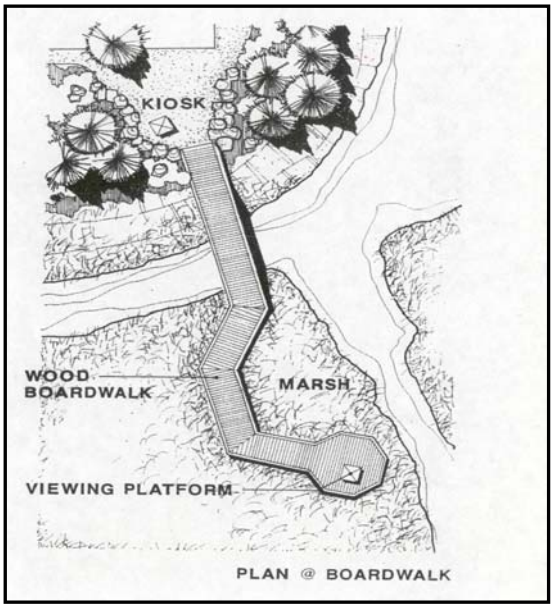

Figure 3, Boardwalk Site Plan from Ocean Beach Park Master Plan; 1988

In order to keep impacts to vegetation and water quality to a minimum, the boardwalk would be constructed one section at a time, working with a pile driver or auger from the deck of the previously constructed section. The construction period would be restricted to a low flow, low tide period to minimize impacts to the water column. The duration of the construction period is estimated at 8-12 weeks. Boardwalk materials would be selected to blend with the natural environment. The weathered wood and light gray/ blue decking used at Oso Flaco Lake Boardwalk in San Luis Obispo County provides an example of the type of construction materials that would be used (see Photo 5).

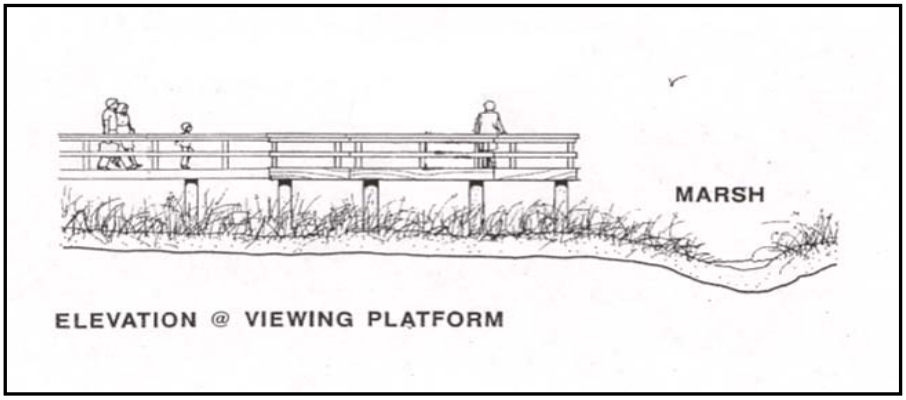

Figure 4; Boardwalk Elevation

Photo 4 – Boardwalk Location

Project Setting

The project location is within the Santa Barbara County Ocean Beach Park, located at the mouth of the Santa Ynez River. The site is highly scenic and of high biological value. The park property is approximately 40 acres in size. Visitor use at the park is estimated at 18,000 vehicle trips per year (actual traffic counts) resulting in approximately 45,000 visitors per year (average 2.5 visitors / vehicle).

The Santa Ynez River ends in a large shallow estuary which is typically open to tidal influence in late winter and early spring, and occasionally stays open into the summer months until a sand bar forms at the river mouth. The sand bar typically blocks tidal influence until storm surge and increased flows in the river during winter months cause it to naturally breach. The southern end of this lagoon is bounded by the Southern Pacific Railroad trestle and Ocean Beach Park, while the northern boundary is Vandenberg Air Force Base (VAFB). The lagoon ends to the west in a large sand bar, normally preventing any tidal influence. To the east, freshwater marshes and dense willow woodlands continue for about a mile upstream to where the agricultural areas of the Valley begin. Because of the seasonal variation in tidal influence, lagoon salinities vary from being close to fresh water to being close to sea water (Swift et al 1997).

The project is proposed in an area of salt marsh vegetation near the mouth of the lagoon. This habitat is considered “rare and worthy of consideration” by the California Natural Diversity Database. Some of the salt marsh areas have a rather simple plant composition which is primarily pickleweed *(Salicornia virginica),* while other areas of the marsh are more diverse containing alkali heath *(Frankenia grandifolia),* jaumea *(Jaumea carnosa)* and saltgrass *(Distichlis spicata).* The channels within the marsh contain a variety of emergent vegetation including California bulrush *(Scirpus californicus),* prairie bulrush *(Scirpus maritmus)* and cattails *(Typha spp).* Other areas of the marsh contain both salt and freshwater marsh plants such as jaumea and pickleweed, as well as coastal isocoma *(Haploppapus venetus),* salt marsh baccharis *(Baccharis douglasi),*

alkali wild rye *(Elymus triticoides),* silverweed *(Potentilla edegii),* and western ragweed *(Ambrosia psilostachya)*. Upstream, large freshwater marshes containing large stands of California bulrush and cattails are found. The upland areas contain dense stands of arroyo willow *(Salix lasiolepis)* and open scrub of coyote bush *(Baccharis pilularis).* The estuary is unique to the region because large mudflats are exposed when the estuary is under tidal influence. This creates a large feeding area for a wide variety of shore birds.

Several species of concern are known to occur, or may occur in the project area. Sensitive animal species include tidewater gobies, savannah sparrows, and steelhead trout. Tidewater gobies (*Eucylogobius newberryi*) could occur in the tidal channel over which the boardwalk would be placed. The tidewater goby is a fish that occurs in estuaries and lagoons throughout coastal California. This species is restricted to waters with low salinity in California's coastal wetland habitats. Tidewater gobies are bottom dwellers and prefer water that is not deeper than three feet. They burrow four to eight inches in coarse sandy soils to spawn. All life stages of tidewater gobies are typically found at the upper end of lagoons in areas of low salinity (commonly less than 10 parts per thousand). Since 1900, the tidewater goby has disappeared from nearly 50 percent of the coastal lagoons within its historic range, including 74 percent of the lagoons south of Morro Bay in central California (USFWS website).

The savannah sparrows (*Passerculus sandwichensis*) in the Santa Ynez River estuary are more similar in body type and plumage to the subspecies *alaudinus* found in Morro Bay, and are thought not to be the endangered subspecies *beldingi* (Paul Collins, personal communication, 2005). Although not the endangered subspecies, savannah sparrows are very common in the marsh adjacent to the Ocean Beach Park parking lot.

Steelhead trout (*Oncorhynchus mykiss*) may also occur in the project area. Historically, the Santa Ynez river system supported the largest steelhead run in southern California and was famous for its sport fishery. In August 1997, the NMFS designated the anadromous steelhead of the Southern Evolutionarily Significant Unit (ESU), which occur in the lower Santa Ynez River below Bradbury Dam, as an endangered species under the ESA.

The estuary is the largest and most important habitat area for water-associated birds in northern Santa Barbara County (Madhart *et al*., 1976, as cited in the Ocean Beach Park Master Plan, 1988). The federally-threatened western snowy plover nest along the coastal foredunes of the sandy beaches west of the estuary. Migrating shorebirds such as willets and long-billed curlews use the mudflat areas. Gulls, sandpipers, and the endangered California least tern use the open areas near and around the sandbar. The open water and tidal channels are used by a variety of waterfowl including mallards, canvas back, teals, and ruddy ducks. Wading birds that inhabit the area include great

egrets, snowy egrets, and great blue heron. Finally, the marsh areas contain habitat for virginia rails, sora, and common yellow-throat.

The estuary's large freshwater marsh upstream of the project site supports a number of amphibians and reptiles. These may include several salamanders and toads, especially the California tree frog, western toad and the listed California red-legged frog. The southwestern pond turtle occurs in freshwater ponds in the upper marsh and western fence lizards and garter snakes can be viewed in upland areas. These freshwater species are not expected to be present in the immediate project area, which is more saline.

A variety of small mammals utilize the marsh including the Audubon cottontail, California ground squirrel, and a number of species of mice. The western harvest mouse (*Reithrodontomys megalotis* sub. *longicaudus*) is present in high densities in the upper margins of the marsh (Collins, 2005). Predators such as the striped skunk, long-tailed weasel, and coyote utilize these small mammals for a food source. In addition, the marsh is heavily utilized by deer which use the willow thickets for cover and forage in the marsh.

Four special status plant species occur in the general project area. These include *Cirsium loncholepis, Cirsium rothophilum, Dithyrea maritima,* and *Lasthenia glabrata* ssp. *coulteri.* The first three of these species occur in freshwater wetlands and/or dune habitats, and would not occur within the area of construction. The fourth species, *Lasthenia glabrata* ssp. *coulteri*, is found within salt marsh habitat.

Environmental Consequences (Beneficial and Adverse)

Beneficial Effects

The benefit of this project will be to provide access and opportunity for viewing estuarine wildlife and habitat, to allow the public to learn first hand about the importance of maintaining this invaluable natural resource and important habitat in a pristine condition. The boardwalk would be available to approximately 45,000 park visitors per year. The project should increase visitor appreciation and awareness of their natural resources and stress the importance of environmental stewardship. While access to the beach continues to be restricted, the boardwalk would provide an alternative, ADA-accessible high quality recreational experience to park visitors. A boardwalk and viewing platform may also help prevent uncontrolled pedestrian traffic into the estuary that can disturb sensitive habitats and wildlife.

Potential Adverse Effects and Measures to Minimize or Avoid Adverse Impacts

The project design includes the following specific measures to avoid or minimize adverse impacts to the environment:

The boardwalk would extend 215 feet out into the estuary, over *Salicornia virginica* marsh habitat and a small estuarine channel. The boardwalk would be constructed on 24 wooden or concrete piles. Pairs of piles would be placed every 12 - 16 feet to support the boardwalk. The piles would be 12 inches in diameter, resulting in a total surface disturbance of 75 square feet, or 0.00173 acres. The boardwalk's total footprint would be approximately 2150 square feet, or 0.05 acres. In order to keep impacts to vegetation and water quality to a minimum, the boardwalk would be constructed one section at a time, working with a pile driver or augur from the deck of the previously constructed section. Care would be taken in constructing the boardwalk so that disturbances to wildlife and habitat caused by the construction would be minimized and human presence would not be unduly intrusive. To preclude any impacts to the sensitive plant species *Lasthenia glabrata* ssp. *coulteri,* which occurs within salt marsh habitat, pre-construction surveys would be conducted. If necessary, a program of salvage, restoration, and enhancement of this species would be conducted.

Savannah sparrows nest in the *Salicornia* vegetation in the project vicinity. These birds could be adversely affected by construction activities. In order to avoid impacts to this species, construction of the boardwalk shall be limited to August 1 through March 1. This timeframe is outside of the species' nesting period (Collins, 2005). This timeframe will also avoid peak tidewater goby spawning and the nesting season of the western snowy plover.

The potential temporary displacement of tidewater gobies from a small section of estuarine channel during construction would represent a minor impact on this species, as there is abundant habitat in the Santa Ynez River estuary outside of the work area.

Construction work would expose soils to erosion and possible sedimentation of the estuary downstream of the work site. The amount of erosion and sedimentation is expected to be minimal due to the implementation of standard Best Management Practices (BMPs) in accordance with the state-required Storm Water Pollution Prevention Plan (SWPPP) for construction projects. The SWPPP would protect the gobies from significant sedimentation or turbidity impacts during construction.

The short-term construction related impacts to this species are considered minor. It should be noted that the same types of environmental protection measures have been successfully implemented by Santa Barbara County for a previous bridge repair project and by State Parks for several recent projects affecting the tidewater goby.

Endangered California least terns forage in the lagoon during the summer months, but would not be significantly affected by the project due to the short duration of construction and the incorporation of appropriate mitigation measures. Likewise, western snowy plovers would not be directly affected as the construction area is located well east of that species' nesting, roosting, and prime foraging habitat.

The project location was surveyed in 1989 for archaeological resources. No indications of archaeological resources were found in the immediate project vicinity. No significant historic resources are known to exist in the construction area.

The boardwalk would be constructed with a low profile. The use of visually compatible materials (i.e., weathered wood and light blue/gray decking) would insure that the project's visual effects would be less than significant. Photo 5 (depicting the boardwalk at Oso Flaco Lake) illustrates how a sensitive design and selection of appropriate construction materials can insure the protection of high visual quality in a natural scenic area.

Photo 5, use of visually compatible materials at Oso Flaco Lake Boardwalk in San Luis Obispo County.

The project setting is remote and generally characterized by low noise levels. Intermittently, the project area is subjected to high noise levels from trains on the railroad track immediately adjacent to the park, as well as from large aircraft noise from VAFB. Noise impacts during construction could adversely affect both park visitors and wildlife in the immediate area. A pile driver could generate noise levels of 95-105 dB (EPA 1971). An auger could generate noise levels of 85 dB. Total construction may be upwards of 2-3 months. Pile driving would occur intermittently as deck sections are

constructed, and would not exceed an estimated total of ten days. Due to the remote location of the project, and the limited duration of high noise generating activities, noise effects of the project would be less than significant.

Measures proposed to be incorporated into the project to minimize impacts to biological resources include the following:

1. Disturbance of the wetland shall be restricted to the minimum area necessary to accomplish project objectives. Direct impacts shall be limited to placement of 24 12-inch diameter wooden or concrete piles and limited excavation around the piles. Removal of native vegetation shall be restricted to the footprint of the 24 boardwalk piles.
2. Any excess materials excavated from the estuary shall be transported to a designated waste or fill site.
3. Standard procedures shall be used to ensure that all equipment is maintained properly and free of leaks during operation and any necessary refueling or repairs are carried out with proper spill containment.
4. In order to avoid impacts to nesting savannah sparrows, construction shall be restricted to periods of low flow, low tidal conditions between August 1 and March 1. This timeframe will also avoid times of peak tidewater goby spawning and the nesting season of the western snowy plover.
5. Santa Barbara County shall hire a qualified biological monitor to conduct a pre-construction survey and to monitor construction activities throughout the project to minimize impacts to all biological resources, including special-status plant and wildlife species. The biological monitor shall be responsible for flagging areas where special-status species are located or concentrated, relocating any special-status species in jeopardy of being killed or injured by construction activities, and inspecting equipment and equipment staging areas for gas and oil leaks.
6. A silt fence shall be installed and maintained to surround the construction area as determined by the biological monitor for the duration of construction activities. A fine (less than one centimeter) mesh shall be used to avoid entrapment of amphibians or fish in the silt fence. The silt fence shall be monitored by a qualified biologist periodically during construction to evaluate its effectiveness. The fencing shall be maintained throughout the construction period and removed on project completion.
7. Before beginning project construction activities, exclusion nets and/or a drift fence shall be installed to exclude tidewater gobies, southern steelhead, and other special-status aquatic species from the project area. Prior to the initiation of construction, the monitor shall inspect the stretch of estuary channel to be crossed by the

boardwalk. If water and tidewater gobies are present, the monitor shall sweep a net to relocate any gobies downstream.

8. During the pre-construction conference with the contractor, the biological monitor shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the tidewater goby and southern steelhead, their habitats at the site, the specific measures that are being implemented to protect these species during construction, project limits and lines of communications concerning any issues with these species.
9. The biological monitor shall train all project personnel prior to participating in project implementation activities. At a minimum, the training will include a description of any state or federally listed species occurring in the area, the general provisions of the state and ESA and the necessity of adhering to the provisions of the acts, the penalties associated with violations of the acts, the general measures being implemented to conserve these species in the project area, and the specific measures and restrictions regarding project implementation.
10. All human generated trash at the project site shall be contained and removed from the work site and disposed of properly at the end of each workday. All construction debris and trash shall be removed from the work area upon completion of the project.
11. The construction contractor will provide the biological monitors with a schedule of planned construction activities 48 hours in advance.
12. All permit conditions, minimization measures, and best management practices shall be implemented to minimize potential adverse impacts to water resources.
13. A Storm Water Pollution Prevention Plan (SWPPP) will be developed by Santa Barbara County and implemented by the contractor. Santa Barbara County shall monitor implementation of the SWPPP.
14. The biological monitor shall have the authority to require the Contractor to stop work if a listed species is located in the work area, until such time that the species is relocated and the origin of the problem has been identified and corrected.
15. Santa Barbara County Flood Control shall review the project plans to insure that the boardwalk would not create or expose visitors to significant flood hazards.
16. After its construction, Santa Barbara County Parks Department shall monitor the boardwalk to insure that proper security is maintained, to avoid any impacts to sensitive resources from vandalism, littering, and other careless or unlawful activity.
17. Prior to construction, temporary exclusion fencing shall be placed along the work limits to prevent entry by the public, workers, or equipment into adjacent habitat areas.

Probability of Success

The probability of success for this project is very high. Similar boardwalks and viewing platforms have been constructed in other areas successfully such as at Oso Flaco Lake in San Luis Obispo County (see Photo 5). This site provides an excellent example of beach and estuary habitat for wildlife viewing and is readily accessible.

Performance Criteria and Monitoring

Performance criteria for this project will be the completion of the project elements described above. Ongoing maintenance of the new facilities will be provided by Santa Barbara County.

Evaluation

This project should result in positive benefits by enhancing the quality and amount of public use at Ocean Beach, which was heavily impacted by the Spill. The Trustees evaluated this project against all threshold and initial screening criteria developed to select restoration projects, and concluded that this project meets these criteria. The Trustees determined that this type and scale of project would provide appropriate compensation for lost or diminished beach user days as result of the spill.

Furthermore, implementation of the Ocean Beach Park Boardwalk and Viewing Platform project is not expected to result in any significant effects to the environment when viewed in the context of the pertinent factors in NEPA, 40 C.F.R. § 1508.27. This project would have a beneficial impact on the environment by educating the public about the natural resources in the area and the importance of environmental stewardship. It also would provide an alternative ADA-accessible, high quality, recreational experience to park visitors, and may limit uncontrolled pedestrian traffic in these sensitive habitats. The project area is habitat to sensitive and special-status species, including three endangered species. However, any adverse effects associated with construction, such as increased noise levels, would be temporary. Also adverse effects will be minimized by constructing one section of the boardwalk at a time, conducting pre-construction surveys to minimize impacts to sensitive plant species, and stopping construction during the nesting period of sensitive bird species. Additionally, as a condition to receiving funds, the County will adopt any necessary measures identified by the USFWS pursuant to its internal section 7 consultation under the ESA and/or its consultation with the NMFS. With the above measures, adverse impacts to listed species and their habitat would be minimized and temporary, and would be outweighed by the beneficial impact from educating the public about this sensitive area.

Budget

Per the Memorandum of Understanding between the Trustee Agencies, approximately $65,520 has been allocated for restoration projects benefiting human recreational beach use. A preliminary cost estimate for constructing the Ocean Beach Park Boardwalk and Viewing Platform is approximately $400,000, so matching funds for this project would be needed. Potential sources of additional funding include Santa Barbara County's Coastal Resource Enhancement Fund and money collected by the county in settlement of *County of Santa Barbara v. Torch Operating Company*, 2001.

4.6 Cumulative Impacts

The Trustees examined a variety of restoration alternatives to restore resources and/or services lost as a result of the Torch Spill. Project-specific environmental consequences for each of the Most Preferred Restoration Alternatives are provided in Section 4.5. This section addresses the potential overall cumulative impacts to be considered in accordance with OPA and NEPA.

The Trustees do not believe that the Most Preferred Restoration Alternatives will cause significant adverse impacts to natural resources or the services they provide. The Most Preferred Restoration Alternatives are expected to primarily have beneficial impacts on the environment through the restoration and protection of biological resources and expansion of human recreational and educational services.

Cumulative environmental impacts are those combined effects on quality of the human environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what federal or non-federal agency or person undertakes such other actions (40 C.F.R. § 1508.7, 1508.25(a), and 1508.25(c)). Since the projects are designed to achieve recovery of injured natural resources, the cumulative environmental consequences will be largely beneficial. Although this plan directs efforts at restoring injured resources and creating beneficial impacts to injured resources, many other local and regional activities may influence the ability of our projects to create net population or species level benefits. Existing threats such as oil spills, El Niño impacts, and changes to prey availability may have negative impacts on the recovery of injured species populations. However, it is expected that the proposed restoration actions described herein would at least work to offset potential adverse impacts of such occurrences. Any unanticipated adverse cumulative adverse effects from a proposed project identified prior to implementation will result in reconsideration of the project by the Trustees.

4.7 Moderately Preferred, Least Preferred, and Non-Preferred Restoration Alternatives

The following is a list of restoration alternatives that the Trustees considered for funding but have decided not to fund for reasons explained below. These projects were suggested to the Trustees by members of the public, non-profit organizations, and government agencies.

All of these projects were evaluated using the project selection criteria described above in Section 4.2, and were compared with the Most Preferred Restoration Alternatives. The Trustees will reevaluate these projects for possible implementation if: 1) any of the Most Preferred projects described in this draft RP/EA prove infeasible, impractical, or otherwise not in the public interest; or 2) any funds remain after the successful implementation of the Most Preferred Alternatives described in this draft RP/EA, provided that such alternative projects address the injuries caused by the spill, are subject to public review and comment, and otherwise meet the requirements of applicable federal and state law. Additional environmental review will be conducted at the project level as necessary should the Trustees decide to reevaluate these alternative projects for implementation.

Table 3 – Moderately Preferred, Least Preferred, and Non-Preferred Restoration Alternatives

Ranking	Project Title
Moderately Preferred	
	Interpretive Center Near Ocean Park
	Coastal Access Boardwalk from Surf Station to Beach
	Black Abalone Restoration
Least Preferred	
	Reduce Take of Rocky Intertidal Species, Enforcement and Education
	Cabrillo High School Aquarium
	Dune Boardwalk from Ocean Beach Park to Surf Station
Non-Preferred	
	Coastal Access Boardwalk from Ocean Beach Park to the beach
	Exotic Species Removal at Guadalupe-Nipomo Dunes
	Aquaculture Proposal
	Oil Spill Response Equipment Staging
	Marine Mammal/Bird Rehabilitation Facility
	Pt. Sal Land Improvements
	Pt. Sal Land Acquisition
	Ocean Park Host Site

4.7.1 Interpretive Center Near Ocean Park

The Interpretive Center near Ocean Park (proposed by Surf-Ocean Beach Commission), would include a 2,500 square foot building to host interactive displays with self-guided tours and interactive display stations. This proposal was categorized as Moderately Preferred due to the limit on the available funds for this type of project (only one recreational project can be implemented). Additionally, some of the educational elements of this project may be combined into the Public Educational Program project (see Section 4.5.1.4).

4.7.2 Boardwalk: Surf Station to Beach

The Boardwalk from Surf Station to the Beach (proposed by Surf-Ocean Beach Commission), was categorized as Moderately Preferred. Due to the limit on the available funds for this type of project, only one recreational project can be implemented. Additionally, the Boardwalk from Surf Station to the Beach proposal is in the area of the existing railroad and the boardwalk would need to include a section on Union Pacific Railroad property in order to provide disabled access. There is no assurance that the railroad would permit this construction. For safety reasons, a boardwalk in this area would also require many switchbacks to provide for a safe gradient, and thus would impact a large area of western snowy plover nesting habitat. Maintenance of safe conditions for the boardwalk in an area of actively blowing sand could also be problematic.

4.7.3 Black Abalone Restoration

The Trustees re-categorized the black abalone restoration project from a Most Preferred Project to a Moderately Preferred Project, after receiving a letter from the original project proponent suggesting that although black abalone were directly impacted by the Spill, before outplanting can be considered, a successful laboratory spawning effort and extensive genetics work on the current population is needed to determine whether such efforts would help or further hinder the existing population's recovery. In addition, black abalone experts were consulted and black abalone have been spawned in a laboratory but it is very difficult to do and much more research is needed. The original black abalone restoration proposal has been changed to a public education program with a focus on black abalone and other rocky intertidal species (see Section 4.5.1.4 Public Educational Program).

4.7.4 Reduce Take of Intertidal Species: Enforcement and Education

This proposal (submitted by U.S. Department of the Interior, Minerals Management Service), was placed in the Least Preferred category because the CDFG is already responsible for protecting intertidal habitats, including enforcing applicable laws and

regulations. Educational elements from this proposed project will be re-directed to the Public Educational Program project with a focus on black abalone and other rocky intertidal species (see Section 4.5.1.4 Public Educational Program).

4.7.5 Cabrillo High School Aquarium

A proposal to fund the Cabrillo High School Aquarium (proposed by Surf-Ocean Beach Commission), has been ranked as Least Preferred due to the low nexus to the Spill, and limited funds for projects in this restoration category. Educational elements from this proposed project will be re-directed to the Public Educational Program project with a focus on black abalone and other rocky intertidal species (see Section 4.5.1.4 Public Educational Program). The Public Educational Program project can also include recognition and public awareness of the Cabrillo High School Aquarium program.

4.7.6 Exotic Species Removal at Guadalupe – Nipomo Dunes

This proposed project (submitted by the Land Conservancy of San Luis Obispo), proposes that funds be contributed to ongoing efforts to eradicate invasive species of iceplant and European beach grass in the Guadalupe-Nipomo Dunes Complex, a program that has been underway since 1999. The Trustees placed this proposal in the Non-Preferred Project category because an eradication and restoration project involving iceplant and European beach grass has already been proposed at VAFB, located at the beach that was directly and heavily impacted by the spill and is thus preferable due to a close nexus to the Spill. And, there are limited funds available for dune restoration (see Section 4.5.1.2 Sandy Beach and Dune Habitat Restoration).

4.7.7 Aquaculture Proposal

This project (submitted by Kimberly Casazza), proposes to establish a small scale restorative aquaculture center to enhance a locally important fish species that is under heavy fishing pressure and whose population is in decline. Because injuries to fish were not claimed, the Trustees have classified this proposal in the Non-Preferred category due to the low nexus and lack of funds for such a program.

4.7.8 Oil Spill Response Equipment Staging

This proposal (submitted by Jon Picciuolo), suggests the construction of an emergency response and oil spill equipment staging area in Lompoc Valley in readiness for a future spill. This proposal is characterized as Non-Preferred because oil spill response equipment is already nearby, e.g., Clean Seas in Carpinteria is an Oil Spill Response Organization (OSRO) with response equipment. Most oil companies have contracts with OSROs for spill response.

4.7.9 Marine Mammal/Bird Rehabilitation Center

This proposal (submitted by Jon Picciuolo), is to provide a staging center with a large quantity of wildlife rehabilitation materials and supplies for marine mammal and bird rescue operations that may be needed for any future oil spills. The Trustees categorized this proposal as Non-Preferred because there are already plans for two rehabilitation facilities near Santa Barbara and one is under construction in Morro Bay (as of July 2005). All three of these facilities will be participants in the Oiled Wildlife Care Network which has wildlife rehabilitation facilities up and down the California coast.

4.7.10 Point Sal Improvements

This proposal involves the development of minimal, rustic visitor serving facilities at Point Sal State Beach. The concept includes re-grading and graveling the parking lot; constructing a pit toilet and water system; and installing picnic tables, interpretive signs, and a stairway to the beach. The Trustees categorized this proposal as non-preferred because this project can only be considered if the Point Sal access road is repaired and re-opened (technical feasibility is questionable). Additionally, there are only limited funds available for recreational projects and this proposed project location is north of the area impacted by the Spill.

4.7.11 Point Sal Land Acquisition

The acquisition of, and/or improvement to, the Point Sal property has been categorized as a Non-Preferred project because of a relatively low nexus geographically to Spill injuries, and the existence of other recreational project proposals closer to the Spill area with lower costs. A large contribution of matching funds would be required and currently, there are no willing sellers of this property. Additionally, a number of comments were received from the public during the Scoping Phase requesting the Point Sal area not be improved to keep public access at a minimum to reduce impacts to the habitat.

4.7.12 Ocean Beach Host Site and Interpretive Signage

This project would involve constructing a host site at Ocean Beach. A trailer pad for a mobile dwelling unit would be built, along with appropriate lighting and electrical hookup equipment. Interpretative or education signage would be added throughout the park that provides information relating to environmental concerns, wildlife identification, and natural habitats surrounding Ocean Beach. Because the Trustees already have a preferred recreational project, described above in Section 4.5.1.4 and because the Trustees are proposing a Public Education Program which will include some elements of

this proposal such as educational signage (refer to Section 4.5.1.5), this project has been categorized as Non-preferred.

4.7.13 Dune Boardwalk from Ocean Beach Park to Surf Station and,
4.7.14 Coastal Access Boardwalk from Ocean Beach Park to the Beach

These two boardwalk projects are ranked as Least Preferred and Non-preferred respectively, in comparison to the other boardwalk projects. The Dune Boardwalk from Ocean Beach to Surf Station project, if designed to maximize views from the back dunes between Ocean Beach Park and Surf Station, may impact nesting areas used by the western snowy plover. If the boardwalk were designed to be out of the line of sight from sensitive nesting areas, the boardwalk would not provide the high quality coastal recreational experience that would be attractive to beachgoers. A Coastal Access Boardwalk from Ocean Beach Park to the beach was ranked as Non-preferred as it would likely impact western snowy plovers and is therefore inconsistent with restoration goals.

5.0 APPLICABLE LAWS AND REGULATIONS

5.1 Overview

The major laws guiding the natural resource damage assessment process and the development of this draft RP/EA are OPA and NEPA. These statutes and the regulations implementing them set forth specific processes for resource injury assessment, restoration planning, impact analysis, and public review. In addition, implementation of selected restoration actions may trigger compliance with other applicable laws, regulations and policies at the federal, state and local levels. A brief description of relevant and potentially relevant federal and state laws, regulations or policies are set forth below.

In addition to laws and regulations, the Trustees must consider relevant environmental or economic programs or plans that are ongoing or planned in or near the affected environment. The Trustees must ensure that their proposed restoration activities neither impede nor duplicate such programs or plans. By coordinating restoration with other relevant programs and plans, the Trustees can enhance the overall effort to improve the environment affected by the incident.

5.2 Key Statutes, Regulations and Policies

5.2.1 Federal Statutes, Regulations and Executive Orders

Oil Pollution Act of 1990, 33 U.S.C. § 2701, et seq.; 15 C.F.R. Part 990

OPA establishes a liability regime for oil spills which injure or are likely to injure natural resources and/or the services that those resources provide to the ecosystem or humans. Federal and state agencies and Indian tribes act as Trustees on behalf of the public to assess the injuries, scale restoration to compensate for those injuries and implement restoration. This draft RP/EA has been prepared jointly by CDFG, USFWS, VAFB, and CSLC. Each of these agencies is a designated natural resource Trustee in accordance with the OPA and/or State law for natural resources injured by the Torch Spill. OPA defines "natural resources" to include land, fish, wildlife, water sources and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States, any State or local government or Indian tribe, or any foreign government. Assessments are intended to provide the basis for restoring, replacing, rehabilitating, and acquiring the equivalent of injured natural resources and services. OPA mandates that the Trustees assess natural resource damages injured under their trusteeship. OPA further mandates that the designated Trustees shall develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent of the natural resources under their trusteeship. The process emphasizes both public involvement and participation by the Responsible Party (ies). Regulations implementing OPA mandate that federal trustees integrate the proposal of restoration action with NEPA compliance. 15 C.F.R. § 990.23.

National Environmental Policy Act, 42 U.S.C. § 4321, et seq.; 40 C.F.R. Parts 1500-1508

The NEPA is the basic national charter for the protection of the environment. Its purposes are to “encourage productive and enjoyable harmony between man and the environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; and to enrich the understanding of the ecological systems and natural resources important to the Nation.” 42 U.S.C. § 4321. NEPA provides a mandate and a framework for federal agencies to consider all reasonably foreseeable environmental effects of their proposed actions and to involve and inform the public in the decision-making process. NEPA also established the Council on Environmental Quality in the Executive Office of the President to formulate and recommend national policies which ensure that the programs of the federal government promote improvement of the quality of the environment.

NEPA requires federal agencies to undertake an environmental analysis for “every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the human environment.” 42 U.S.C. § 4332(C). Significance under the NEPA regulations at 40 C.F.R. § 1508.27 requires consideration of both context and intensity. Context requires the action be analyzed in the appropriate

setting. Both short- and long-term effects are relevant. And intensity refers to the severity of the impact.

Generally, when it is uncertain whether an action will have a significant effect, federal agencies will begin the NEPA planning process by preparing an Environmental Assessment (EA). The EA may undergo a public review and comment period. Federal lead agencies may then review the comments and make a determination. Depending on whether the effects of a proposed project are considered significant, an Environmental Impact Statement or a Finding of No Significant Impact will be issued.

Through development of the draft RP/EA, the Trustees have integrated OPA restoration planning with the NEPA process as required by OPA implementing regulations. 15 C.F.R. § 990.23. This integrated process allows the Trustees to meet the public involvement requirement of OPA and NEPA concurrently. Subsequent NEPA compliance may be required prior to implementation of the proposed restoration actions described herein pending development of further project-level detail.

Clean Water Act, 33 U.S.C. § 1251, et seq.

The Federal Water Pollution Control Act (commonly referred to as the Clean Water Act or the CWA) is the principle federal statute governing water quality. The CWA's objective is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA governs both the direct (point source) and indirect (non-point source) discharge of pollutants into the nation's waters.

Section 402 of the Act established the National Pollution Discharge Elimination System (NPDES) program. The Act allows EPA to authorize state governments to implement the NPDES program. Section 301 of the Act prohibits the discharge into navigable waters of any pollutant by any person from a point source unless it is in compliance with a NPDES permit. Section 319 of the Act directs states to identify best management practices and measures to reduce non-point source pollution.

Section 311 of the CWA regulates, *inter alia*, the discharge of oil and other hazardous substances into navigable waters, adjoining shorelines, and waters of the contiguous zone. The Act allows the federal government to remove the substance and assess the removal costs against the responsible party. The CWA defines removal costs to include costs for the restoration or replacement of natural resources damaged or destroyed as a result of a discharge of oil or a hazardous substance.

Section 404 of the Act authorizes the U.S. Army Corps of Engineers to issue permits, after notice and opportunity for public hearings, for the discharge of dredged or fill material into the waters of the United States. Section 401 of the Act provides that any applicant for a federal permit or license to conduct any activity which may result in any

discharge into navigable waters must obtain certification of compliance with state water quality standards.

Rivers and Harbors Appropriation Act of 1899, 33 U.S.C. § 401, et seq.

The Rivers and Harbors Act regulates development and use of the Nation's navigable waterways. Section 10 of the Act prohibits unauthorized obstruction or alteration of navigable waters and vests the U.S. Army Corps of Engineers with authority to regulate discharges of fill and other materials into such waters

Coastal Zone Management Act, 16 U.S.C. § 1451, et seq.

The goal of the Coastal Zone Management Act of 1972 (CZMA) is to encourage and assist states to preserve, protect, develop and, where possible, restore and enhance valuable natural coastal resources. Participation by states is voluntary. The state of California implements the federally-approved California Coastal Management Program (CCMP). The enforceable policies of the CCMP are found in Chapter 3 of the California Coastal Act of 1976.

For all of the California coast, except San Francisco Bay, the California Coastal Commission implements the CZMA (in the San Francisco Bay area, the implementing agency is the San Francisco Bay Conservation and Development Commission). The Commission is responsible for reviewing proposed federal and federally-authorized activities to assess their consistency with the CCMP. A federal agency must conduct its activities (including federal development projects, permits and licenses, and assistance to state and local governments) in a manner consistent with the CCMP. The process established to implement this requirement is called a consistency determination for federal activities and development projects and a consistency certification for federal permits and licenses and federal support to state and local agencies. The federal Trustees will comply with the CZMA as required.

Endangered Species Act, 16 U.S.C. § 1531, et seq.

The purpose of the ESA is to conserve endangered and threatened species and the ecosystems upon which they depend. Under the ESA, the National Oceanographic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), and the USFWS publish lists of endangered and threatened species. Pursuant to Section 7 of the ESA, each federal agency shall, in consultation with the Secretary, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Before initiating an action, the federal action agency, or its non-federal permit applicant, must ask the USFWS and/or NMFS to provide a list of threatened, endangered, proposed, and candidate species and designated critical

habitats that may be present in the project area. If no species or critical habitats are present, the federal action agency has no further ESA obligation under section 7 and consultation is concluded. If a listed species is present and the federal action agency determines the project may affect a listed species, consultation is required. For major construction activities, a biological assessment is required to assist in the determination of whether the proposed action is likely to adversely affect listed species and critical habitat. For actions that are not major construction activities, the federal action agency must provide the USFWS and/or NMFS with an account of the basis for evaluating the likely effects of the action.

If the action agency determines and the USFWS and/or NMFS concurs that the project is not likely to adversely affect any listed species, then the consultation (informal to this point) is concluded and the decision is put in writing. Although not required, the federal action agency may request written concurrence from the USFWS and/or NMFS that the proposed action will have no effect on listed species or critical habitat. If the federal action agency determines that a project may adversely affect a listed species or designated critical habitat, formal consultation is required. There is a designated period of time in which to consult (90 days), and beyond that, another set period of time for the USFWS and/or NMFS to prepare a biological opinion (45 days). The determination of whether or not the proposed action would be likely to jeopardize the species or adversely modify its critical habitat is contained in the biological opinion. If a jeopardy or adverse modification determination is made, the biological opinion must identify any reasonable and prudent alternatives that could allow the project to move forward.

The federally endangered California brown pelican and the federally threatened western snowy plover may utilize, and in the case of plovers, nest on habitat where projects are implemented. Additionally, several species of birds, including the California brown pelican and the western snowy plover may utilize habitats near the proposed restoration projects. These projects will be implemented outside of the nesting and rearing season for the listed species.

The Trustees do not believe any of the proposed restoration actions would likely adversely affect a listed species or critical habitat. However, for each proposed restoration project, the Trustees will evaluate the potential effects of the project on listed species or designated critical habitat and will perform the appropriate level of consultation with the USFWS and/or NMFS pursuant to the requirements of the ESA. Also, as the USFWS is a Trustee, the USFWS will conduct an internal section 7 consultation on the RP/EA as well as project- specific consultation on any project where the USFWS is the lead.

Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801, et seq.

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), as amended and reauthorized by the Sustainable Fisheries Act of 1996, establishes a program to promote the protection of essential fish habitat (EFH) in the review of projects conducted under federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. After EFH has been described and identified in fishery management plans by the regional fishery management councils, federal agencies are obligated to consult with the Secretary of Commerce with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any EFH.

The Trustees do not believe that the any of the proposed restoration actions would adversely affect EFH; the proposed actions are expected to promote the protection of fish resources and EFH.

Fish and Wildlife Coordination Act, 16 U.S.C. § 661, et seq.

The Fish and Wildlife Coordination Act (FWCA) provides the basic authority for the USFWS involvement in the evaluation of impacts to fish and wildlife from proposed water resource development projects. The FWCA requires that federal agencies consult with the USFWS (and/or the NMFS as may be appropriate), and state wildlife agencies for activities that affect, control or modify waters of any stream or bodies of water, in order to minimize the adverse impacts of such actions on fish and wildlife resources and habitat. This consultation is generally incorporated into the process of complying with Section 404 of the Clean Water Act, NEPA or other federal permit, license or review requirements. The Trustees do not expect any of the proposed restoration actions to trigger application of the FWCA.

Marine Mammal Protection Act, 16 U.S.C. § 1361, et seq.

The Marine Mammal Protection Act (MMPA) prohibits, with certain exceptions, the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S. The Secretary of Commerce is responsible for the conservation and management of pinnipeds (other than walruses) and cetaceans. The Secretary of Commerce delegated MMPA authority to NOAA Fisheries. The Secretary of the Interior (through the USFWS) is responsible for walruses, sea otters, polar bears, manatees, and dugongs. Title II of the MMPA established an independent Marine Mammal Commission (and its Advisory Committee) which provides independent oversight of the marine mammal conservation policies and programs being carried out by the federal regulatory agencies. The Commission is charged with developing, reviewing, and making recommendations on

domestic and international actions and policies of all federal agencies with respect to marine mammal protection and conservation and with carrying out a research program. The MMPA provides for several exceptions to the moratorium on taking and importation of marine mammals and marine mammal products. The Secretary may issue permits for take or importation for purposes of scientific research, public display, photography for educational or commercial purposes, enhancing the survival or recovery of a species or stock, importation of certain polar bear parts taken in sports hunting in Canada, and incidental taking in the course of commercial fishing operations.

The Trustees do not believe that the any of the proposed restoration actions have the potential to result in the take, injury or harassment of any species protected under the MMPA.

Migratory Bird Treaty Act of 1918, 16 U.S.C. § 703, et seq.

The Migratory Bird Treaty Act (MBTA) implements four international treaties involving protection of migratory birds, including all marine birds, and is one of the earliest statutes to provide for avian protection by the federal government. The MBTA generally prohibits actions to "pursue, hunt, take, capture, kill, attempt to take, kill, possess, offer for sale, sell, offer to purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird…or any part, nest, or egg of such bird." Exceptions to these prohibitions are only allowed under regulations or permits issued by USFWS. These permits include special use permits for rehabilitation, possession and salvage of birds oiled during spill response, which usually provides the primary data for determining extent of injury to marine birds and the need for restoration.

The Trustees do not expect that implementation of any of the proposed restoration actions would result in any action prohibited by the MBTA. Consultation with the USFWS will occur as appropriate.

National Marine Sanctuaries Act, 16 U.S.C. § 1431, et seq.

The National Marine Sanctuaries Act (NMSA) authorizes the Secretary of Commerce (Secretary) to designate and manage areas of the marine environment with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational, or esthetic qualities as national marine sanctuaries. Day-to-day management of national marine sanctuaries has been delegated by the Secretary to the National Marine Sanctuary Program. The primary objective of the NMSA is to protect marine resources, such as coral reefs, sunken historical vessels or unique habitats.

The NMSA prohibits the destruction, loss of, or injury to any sanctuary resource. The Secretary is required to conduct such enforcement activities as are necessary and reasonable to carry out the Act. The Secretary may issue special use permits which authorize specific activities in a sanctuary to establish conditions of access to and use of any sanctuary resource or to promote public use and understanding of a sanctuary resource. The NMSA also establishes liability for response costs and natural resource damages for injury to sanctuary natural resources.

The Trustees do not believe any of the proposed restoration actions would adversely affect any marine sanctuary resource. If any of the proposed restoration actions are implemented within a Sanctuary, they will be conducted in full compliance with the NMSA.

Information Quality Act, Public Law 106-554, Section 515

Information disseminated by federal agencies to the public after October 1, 2002, is subject to information quality guidelines developed by each agency pursuant to Section 515 of Public Law 106-554 that are intended to ensure and maximize the quality of the objectivity, utility and integrity of such information. This draft RP/EA is an information product covered by information quality guidelines established by DOI for this purpose. The quality of the information contained herein is consistent with these guidelines, as applicable.

Executive Order 11988 – Construction in Flood Plains

The 1977 Executive Order seeks to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct or indirect support of development in flood plains wherever there is a practicable alternative. Each federal agency is responsible for evaluating the potential effects of any action it may take in a flood plain. Before taking an action, the federal agency should determine whether the proposed action would occur in a flood plain. For any major federal action significantly affecting the quality of the human environment, the evaluation would be included in the agency's environmental impact statement prepared pursuant to NEPA. The agency should consider alternatives to avoid adverse effects and incompatible development in flood plains. If the only practicable alternative requires siting in a flood plain, the agency should: (1) design or modify the action to minimize potential harm, and (2) prepare and circulate a notice containing an explanation of why the action is proposed to be located in the flood plain.

Executive Order 11990 – Protection of Wetlands

This 1977 Executive Order seeks to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to

avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. Pursuant to this executive order, each federal agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. In making this finding the head of the agency may take into account economic, environmental and other pertinent factors. Executive Order 11990 does not apply to the issuance by federal agencies of permits, licenses, or allocations to private parties for activities involving wetlands on non-federal property.

Executive Order 13112 - Invasive Species

The 1999 Executive Order 13112 requires that all federal agencies whose actions may affect the status of invasive species shall, to the extent practicable and permitted by law, (1) identify such actions; (2) take actions specified in the Order to address the problem consistent with their authorities and budgetary resources; and (3) not authorize, fund, or carry out actions that they believe are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, "pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions."

Executive Order 12898 - Environmental Justice

The 1994 Executive Order 12898 requires each federal agency to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority and low income populations. In the memorandum to heads of departments and agencies that accompanied Executive Order 12898, the President specifically recognized the importance of procedures under NEPA for identifying and addressing environmental justice concerns. The memorandum states that “each Federal agency shall analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by [NEPA].” The memorandum particularly emphasizes the importance of NEPA’s public participation process, directing that “each Federal agency shall provide opportunities for community input in the NEPA process.” Agencies are further directed to “identify potential effects and mitigation measures in consultation with affected communities, and improve the accessibility of meetings, crucial documents, and notices.” The Council on Environmental Quality has oversight of the federal government’s compliance with Executive Order 12898 and NEPA.

The Trustees have concluded that there are no low-income or ethnic minority communities that would be adversely affected by implementation of any of the proposed restoration actions. Additionally, the Trustees will make every effort to involve the affected community by providing notice to members of the public and access to related documents.

5.2.2 State Statutes

California Environmental Quality Act, California Public Resources Code § 21000-21178.1

CEQA was adopted in 1970, and its basic purposes are to inform California governmental agencies and the public about the potentially significant effects of proposed activities, identify ways that environmental damage can be avoided or significantly reduced, prevent significant avoidable damage to the environment through adoption of feasible alternatives or mitigation measures, and to disclose the reasons for agency approval of a project resulting in significant environmental effects.

The CEQA process begins with a preliminary review as to whether CEQA applies to the project in question. Generally, a project is subject to CEQA if it involves a discretionary action that is carried out, funded or authorized by an agency and that has the potential to impact the environment. Once the lead agency for the project determines that the project is subject to CEQA, the lead agency must then determine whether the action is exempt from CEQA compliance under either a statutory or categorical exemption. Examples of categorical exemptions include actions taken by regulatory agencies for protection of natural resources and actions by regulatory agencies for protection of the environment (Title 14 CCR, Chapter 3, § 15307-15308).

If the lead agency determines that the project is not exempt, then an Initial Study is generally prepared to determine whether the project may have a potentially significant effect on the environment. Based on the results of the Initial Study, the lead agency determines whether to prepare a Negative Declaration (*i.e.*, the project will not result in significant adverse effects to the environment) or an EIR. The test for determining whether an EIR or negative declaration must be prepared is whether a fair argument can be made based on substantial evidence that the project may have a significant adverse effect on the environment.

CEQA encourages the use of a federal EIS or FONSI prepared pursuant to NEPA when such documents are available, or the preparation of joint state/federal documents, in lieu of preparing a separate EIR or negative declaration under CEQA. Accordingly, this draft RP/EA and subsequent FONSI, if issued, may be relied upon by the state Trustee agencies or other state or local agencies towards compliance with CEQA as required for discretionary projects that are authorized, funded or carried out by California state or local agencies. To this end, the state Trustees will coordinate with the federal Trustees

to ensure the RP/EA and FONSI meet the provisions of CEQA Guidelines including state public review requirements.

California Lempert-Keene-Seastrand Oil Spill Prevention and Response Act, Government Code § 9574.1, et seq.

The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act became effective on September 24, 1990. This legislation is the key state compensatory mechanism for subsequent spills and establishes a comprehensive liability scheme for damages resulting from marine oil spills. Recoverable damages include injury to natural resources, the cost of rehabilitating wildlife, habitat, and other resources, and loss of use and enjoyment of natural resources, public beaches, and other public resources. Responsible parties are required to fully mitigate adverse impacts to wildlife, fisheries, and wildlife and fisheries habitat by successfully carrying out environmental restoration projects or funding the activities of CDFG to carry out environmental restoration projects.

California Coastal Act, California Public Resources Code § 30000, et seq.

The California Coastal Act was enacted by the California State Legislature in 1976 to provide long-term protection of California's 1,100-mile coastline for the benefit of current and future generations. The Coastal Act created a partnership between the state (acting through the California Coastal Commission [Commission]) and local government (15 coastal counties and 58 cities) to manage the conservation and development of coastal resources through a comprehensive planning and regulatory program. New development in the Coastal Zone may require a permit from the Commission or the appropriate local government agency. The Commission also reviews and approves Local Coastal Programs, which are the basic planning tools used by local governments to guide development in the Coastal Zone.

For projects that propose new development (*i.e.*, the Boardwalk and Viewing Platform at Ocean Beach Park Estuary), the lead agency responsible for implementing that project will seek the necessary permits and approvals including any required coastal development permit.

California Endangered Species Act, California Fish and Game Code § 2050 et seq.

Pursuant to the California Endangered Species Act (CESA) (California Fish and Game Code Sections 2050 *et seq.*), it is the policy of the state of California that state agencies should not approve projects as proposed that would jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species if there are reasonable and prudent alternatives available. However, if reasonable alternatives are

infeasible, individual projects may be approved if appropriate mitigation and enhancement measures are provided.

Pursuant to the CESA, the Fish and Game Commission has established a list of threatened and endangered species based on criteria recommended by the California Department of Fish and Game. Section 2080 of the California Fish and Game Code prohibits "take" of any species that the Commission determines to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful development projects. The CESA emphasizes early consultation to avoid potential impacts to rare, endangered, or threatened species and to develop appropriate mitigation planning to offset project-caused losses of populations of listed species and their essential habitats.

The Trustees do not believe any of the proposed restoration actions would adversely affect state-listed species, but will consult with CDFG as appropriate for projects implemented in areas of state jurisdiction. The CDFG Habitat Conservation and Planning Branch (HCPB) will review the CEQA documentation filed for proposed restoration actions requiring CEQA compliance, *e.g.* the Ocean Beach Park Boardwalk and Viewing Platform project, comment on any impacts arising from project activities, and make recommendations regarding those resources held in trust for the people of California. The CDFG HCPB is also responsible for implementing CESA and will determine if CESA permitting requirements are triggered. Also, in instances where CDFG implements or authorizes activities in areas of state jurisdiction, e.g. issues a CESA permit, CDFG may act as a lead or responsible agency under CEQA.

Public Resources Code, Division 6, § 6001, et seq.

The Public Resources Code, Division 6, gives the California State Lands Commission trustee ownership over state sovereign tide and submerged lands. Permits or leases may be required from the State Lands Commission if a restoration project is located on such lands.

5.2.3 Other Potentially Applicable Statutes, Regulations and Executive Orders

Additional statues, implementing regulations or executive orders may be applicable to NRDA restoration planning activities. Additionally, local permits or other local requirements may apply. Following are some additional potentially applicable federal and state statutes and federal executive orders.

- National Park Act of August 19, 1916 (Organic Act), 16 U.S.C. § 1, *et seq*.
- Archaeological Resources Protection Act, 16 U.S.C. § 460, *et seq*.

- National Historic Preservation Act of 1966 as amended (16 U.S.C. § 470-470t, 110)
- Clean Air Act, 42 U.S.C. § 7401, *et seq*.
- Executive Order 11514 – Protection and Enhancement of Environmental Quality
- Executive Order 11991 – Relating to the Protection and Enhancement of Environmental Quality
- Porter-Cologne Water Quality Control Act, California Water Code, § 13000 *et seq*.

6.0 LIST OF PREPARERS

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Steve Henry, U.S. Fish and Wildlife Service
Luanne Lum, Vandenberg Air Force Base
Sarah Mongano, California State Lands Commission
Jeff Phillips, U.S. Fish and Wildlife Service
Dennis Ryan, California Department of Fish and Game

7.0 LIST OF AGENCIES AND PERSONS CONSULTED

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8.0 LITERATURE CITED/BIBLIOGRAPHY

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APPENDICES

APPENDIX A: Public Comments and Project Proposals Submitted During Scoping Phase

APPENDIX B: Mailing List

APPENDIX A

PUBLIC COMMENTS AND PROJECT PROPOSALS SUBMITTED DURING SCOPING PHASE

SUMMARY OF VERBAL COMMENTS RECEIVECED
FROM NOVEMBER 4, 2004 PUBLIC WORKSHOP
FOR TORCH SCOPING DOCUMENT

1) Spend Natural Resources Damage Assessment money in Lompoc area for better access at Surf Beach (4 comments).
2) Open Ocean Beach during western snowy plover nesting season.
3) Install interpretive center at Ocean Beach Park.
4) Concern regarding beach access at surf Station having to cross railroad tracks to get to the beach, request improving beach access at this location.
5) Do not spend money at Point Sal.
6) Hold next public meeting at same location (Lompoc City Hall).

SUMMARY OF WRITTEN COMMENTS RECEIVECED ON TORCH SCOPING DOCUMENT

Melissa Boggs-Blalack

Staff Environmental Scientist

Department of Fish and Game

OSPR 213 Beach Street

Morro Bay, CA 93442

FAX (805) 772-7569

November 6, 2004

PO Box 754

Sebastopol, CA 95473

RE: POINT SAL

Dear Ms. Boggs-Blalack,

I am writing to support the purchase of the 90 acre parcel on Paradise Beach near Point Sal.

I am also writing to request that Point Sal road be opened ONLY to the saddle, and that minimal improvement be made including a gravel parking lot, pit toilet, Ranger Station, picnic benches and interpretive signs.

Although I live in northern California, I have visited Point Sal, and love it. It is one of nature's beautiful places. I think Point Sal State Beach should have minimal development and should be managed by State Parks.

Sincerely,

Linda Hanes

Linda Hanes

Citizens For A Vehicle Free Nipomo Dunes

P.O. Box 73 • Nipomo, California 93444-0073

O.H.V. Riding Areas In California

- "Corral Canyon", Cleveland National Forest, 1,800 Acres
- "Little Rock", Angeles National Forest, 46 Acres
- "Rowher Flat", Angeles National Forest, 145 Acres
- "San Gabriel Canyon", Angeles National Forest, 180 Acres
- "Wildomar", Cleveland National Forest, 340 Acres
- "Buttercup Valley", BLM - El Centro Resource Area Office, 30,000 Acres
- "Dove Springs", BLM - Ridgecrest Resource Area OFfice, 161 Acres
- "Dumont Dunes", BLM - Barstow Resource Area Office, 2,200 Acres
- "El Mirage", BLM - Barstow Resourcee Area OFfice, 10,400
- "Glamis/Gecko", BLM - El Centro Resource Area Office, 149,000 Acres
- "Jawborne", GLM - Riedgecrest Resource Area Office, 133 Acres
- "Johnson Valley", BLM - Barstow Resource Area Office, 261 Acres
- "Mammoth Wash", BLM - El Centro Resource Area Office, 8,000 Acres
- "Plaster City", BLM - El Centro Resource Area Office, 100,000 Acres
- "Rasor", BLM - Barstow Resource Area Office, 32 Acres
- "Rice Valley Dunes", BLM - Palm Springs - South Coast Resource Area Office, 4,000 Acres
- "Spangler Hills", BLM - Ridgecrest Resource Area Office, 2,000 Acres
- "Stoddard Valley", BLM - Barstow Resource Area Office, 125 Acres
- "Ocotillo Wells", California Dept. of Parks & Recreation, 4,000 Acres
- "Hungary Valley", California Dept. of Parks & Recreation, 5,100 Acres
- "Pismo Dunes", California Dept. of Parks & Recreation, 2,000 Acres
- "Moabi Regional Park", San Bernardino County, 65 Acres

Total Acres: 319,988

To: Melissa Boggs

Re: Point Sal
Paradise Beach

Pics: Of Beach

We are in suppo
of the purchase of
90 acres with ~6
miles of beach.
Most of our
members are un-
able to attend the
meeting in Lompo
We urge purchase
of this 90 acres as
soon as possable.

Bill Denneen
Biologist
Exec. Director

Jon Picciuolo
445 Oak Hill Terrace
Lompoc, CA 93436
(805) 733-1217

Ms. Melissa Boggs-Blalack, Environmental Scientist
Calif. Dept. of Fish & Game, Oil Spill & Response
213 Beach Street
Morro Bay, CA 93442

November 5, 2004

Subj: Restoration, Torch/Platform Irene Oil Spill

Dear Ms. Boggs-Blalack,

I read your scoping document and attended the November 4th hearing in Lompoc. I appreciate this opportunity to provide input to your scoping process. The 17 miles of coastline fouled by the spill are well known to me; I have hiked that coastline for years and well remember the damage the oil did -- it was a real tragedy.

From the first slide presented during the Lompoc hearing, it is my understanding that the $2.54-million is intended, by U.S. and State of California statutes, to be primarily compensation for damages to wildlife and habitat caused by the September '97 Torch oil spill. Therefore, I believe that the bulk of the money should be spent for projects such as 1 through 4 in Table 1 of your scoping document. Projects 5 through 9, although worthy, seem to be mostly for the benefit of humans who were only indirectly affected by the spill.

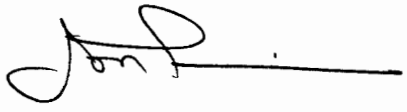
The $2.54-million should, in my opinion, be spent largely for projects along that part of the coast of northern Santa Barbara County which was the most severely impacted area.

Other possible uses for the money include:

- Pre-staging a large quantity of oil cleanup supplies in the Lompoc Valley in readiness for the next offshore spill (Irene's extraction & conveying facilities are old and deteriorating; another spill should be anticipated).

- Pre-staging a large quantity of material to be used for sea mammal rescue and bird rescue operations in the aftermath of another offshore spill in the Lompoc area.

Sincerely,



Jon Picciuolo

Melissa,

Here are my thoughts regarding the disbursement of the $23 million remaining of the 1997 Torch Oil Spill settlement. The only information I've read regarding this subject was that reported in the recent December 9, 2004 issue of the Santa Maria Sun. If I've made erroneous assumptions, I'd like to apologize in advance.

Assuming local governments have been reimbursed for "out of pocket" expenses related to the oil spill clean up, the remaining settlement money should be used for the restoration of natural resources. Communities of people and development have <u>already</u> taken their toll on habitats. To give <u>this</u> money back to the communities as the Surf-Ocean Beach Commission has suggested is giving to those who have enough and have other means of getting what they feel they need. It would be like giving a second helping to those who have already eaten while others are still hungry. The money <u>belongs</u> to the affected wildlife and to the restoration of their habitats.

I particularly like the idea of acquiring land in the Point Sal area especially since it is remote. That gives it the advantage of fewer people objecting to its protection or impacting the area. I feel the Surf-Ocean Beach Commission is interested more in making its beaches attractive to tourists and to themselves rather than mitigating the damage caused by the oil spill. They seem to want the money for their own self interest but I repeat, the money <u>belongs</u> to the affected wildlife and to the habitat restoration. <u>Once wildlife and habitats are fully restored and protected</u>, I would love to see people enjoy strolling and exploring these wild places as long as we don't contribute to their degradation and eventual destruction. Then tourists would really have something to see!

Thanks for listening,

Becky Deutsch
Santa Maria
922-3472

From: Bill Denneen <bdenneen@slonet.org>
To: <mboggs@ospr.dfg.ca.gov>
Date: Fri, Nov 5, 2004 3:02 PM
Subject: ROAD

TO: Melissa Boggs-Blalack
Staff Environmental Scientist
Department of Fish and Game, OSPR
213 Beach Street, Morro Bay, CA 93442
(805) 772-1756 FAX (805) 772-7569 E-Mail mboggs@ospr.dfg.ca.gov

RE: POINT SAL ROAD Proposed:: 1. reopened, re-grade 2. gravel parking lot; 3.construct a pit toilet 4. water system 5.install picnic benches, 6. interpretive signs.

COMMENT: I would like my comments to become part of the record.
I propose that the road be open to the "saddle" only. The road should NOT be repaired beyond this point to Point Sal State Beach. The beach area should remain a hiking destination with access ONLY by trail. A trail from the "saddle" to this spectacular remote beach should be installed with removal of the remains of the old road. My observations are that repair of the steep downhill western section of PS Road would be VERY expensive; there are major landslides here. A small parking lot with minimal facilities at the "saddle" at the demolished "tracking station" would be appropriate. Restroom, ranger station, parking facilities would be fine here and much easier to maintain than on the beach itself.
Opening the road and putting in the facilities would require the State Park System to have a Ranger there when the road is open. The State Park Mission in Lompoc is in charge of Point Sal State Park.

REPEAT COMMENTS on LAND PURCHASE:
I urge the purchase of this property. This 90 acres with .6 miles of beach is part of what many of us call Paradise Beach. We have camped here many time. We had a cabin here at one time. I would guess that over the years I have taken over one thousand people here. The land should NOT be made into a marina as proposed at one time. This area should not become an OHV "Recreation" Area as proposed at one time. There is no question about the purchase of the 90 acres——DO IT ASAP.

William Denneen, Biologist, 1040 Cielo Lane, Nipomo,93444

Received 7 additional E-mails Similar to this E-mail.

From: Bill Denneen <bdenneen@slonet.org>
To: <Mboggs@OSPR.DFG.CA.GOV>
Date: Thu, Nov 4, 2004 4:20 PM
Subject: POINT SAL

TO: Mellisa Boggs-Balalack DF&G
RE: Meeting tomorrow (Nov. 4) at 7Pm at Lompoc City Council Chambers, 100 Civic Center Plaza. This meeting concerns the purchase of 90 acres of land beteewn Point Sal and Mussel Rock. I request my comments become part of the record.
REQUEST: I be put on your mailing list at <bdenneen@slonet.org> and 1040 Cielo Lane, Nipomo, CA.,93444
COMMENTS:
I urge the purchase of this property. This 90 acres with .6 miles of beach is part of what many of us call Paradise Beach. We have camped here many time. We had a cabin here at one time. I would guess that over the years I have taken over one thousand people here. The land should NOT be made into a marina as proposed at one time. This area should not become an OHV "Recreation" Area as proposed at one time.
The proposal mentions that this 90 acres will managed by one of the following groups: Nature Conservancy, FWS, Country Parks or State Parks. There is also a proposal to open the Point Sal Road with specific improvements (e.g. Parking Lot). I need more time to think about this proposal. It should be mentioned that with the road closed people have to walk to Point Sal. This walk, although difficult, makes for a transition from driving cars to experiencing nature. For many years people could drive to Point Sal State Beach .For many years I have cleaned up Point Sal SB as part of Coastal Clean-up each Sept. When the road was opened we would get tons of trash at the parking lot--with the road closed we get maybe 25-50 items of trash. WHAT A DIFFERENCE! I will have to get back to you about opening the road after I consider it further.
There is no question about the purchase of the 90 acres-------DO IT ASAP.
I can not make this evening meeting because I can not drive at night (glaucoma).

Bill Denneen, Retired Biologist, 1040 Cielo Lane , Nipomo, 93444

Received 9 additional E-mails Similar to this E-mail including 1 to keep Pt. Sal a 'dog beach'.

From: Craig <cflo@dock.net>
To: "Melissa Boggs" <mboggs@OSPR.DFG.CA.GOV>
Date: Fri, Oct 29, 2004 9:12 AM
Subject: Re: Scoping Doc.; Torch/Irene NRRP Concepts

At 09:33 AM 10/28/2004, you wrote:
>see attached doc. thanks for your interest!
>Melissa Boggs-Blalack
>... Torch Platform Irene Scoping Document for Restoration Planning.

Dear Melissa,

Thanks very much for providing the scoping document.

I have briefly reviewed it, and offer the following suggestion:

If and when interpretive signage is placed at the Santa Ynez River lagoon/estuary, California Trout believes that it would be both appropriate and educationally useful if information related to the biological significance and functions of the Santa Ynez River lagoon includes specifics about the historic, large spawning run of southern steelhead (now federally listed as endangered--see http://www.nwr.noaa.gov/1salmon/salmesa/stlhsca.htm). This steelhead run was once estimated by a Department of Fish and Game steelhead biologist (Leo Shapovalov, the "dean" of postwar steelhead biology) to number in the 20,000-30,000 range, the largest in all of southern California.

The importance of lagoon/estuary habitat for the yearling smolts for completion of their physiological changeover to salt water should also be highlighted for visitors to this area of the Santa Ynez River. It would be prudent and responsible of the Trustee Council to develop specifications for bidders on such interpretive signage that includes, at minimum,
- a description of the historic run
- a discussion of the importance of brackish-water lagoon habitat to the smolts returning to sea.

Similar information has already been developed for the Watershed Resource Center at Arroyo Burro Beach on the South Coast of Santa Barbara County, through the efforts of the Community Environmental Council of Santa Barbara (see http://www.communityenvironmentalcouncil.org/wrc/)

Finally, a note about current efforts to restore a self-sustaining run of steelhead to the Santa Ynez River should be included. Visitors to the beach and lagoon/estuary should understand that restoration goes beyond basic maintenance of the species as endangered in the Lower Santa Ynez River (as currently specified in the U.S. Bureau of Reclamation's current Lower River Fish Management Plan).

Thanks very much for considering these comments as you develop and implement plans for restoration projects along the coastline area affected by the Platform Irene pipeline oilspill.

Sincerely,
Craig Fusaro

Ms. Melissa Boggs-Blalack
Environmental Scientist, California Department of Fish and Game, Oil Spill Prevention and Response
213 Beach Street
Morro Bay, California 93442

I have reviewed the proposed Torch/Platform Irene Oil Spill scoping document and have six comments:

1. If the impact was to 17 miles of the coastline near Surf Beach, why is an area from Big Sur to Ventura (hundreds of miles) being included in this plan? The "damage" occurred in a substantially smaller area; the compensation was for damages resulting from the spill; and, there were no damages identified outside the 17-miles discussed in the scoping document.

> *"The Spill released at least 163 barrels (or 6,846 gallons) of petroleum products into the Pacific Ocean. Subsequent movement of the crude oil resulted in fouling of approximately 17 miles of northern Santa Barbara County coastline, and caused impacts to a variety of natural resources. The degree of oiling varied along the affected coastline, with the most heavily oiled area being Surf Beach on the VAFB. (Page 3, Scoping Document)"*
>
> *"The oil came ashore on sandy beaches and on rocky intertidal areas from Minuteman Beach to Boathouse Beach at VAFB, and impacted at least 17 miles of Santa Barbara County coast shoreline. The estuaries at San Antonio Creek, Honda Creek, and the Santa Ynez River were also impacted. (Page 6, Scoping Document)"*

2. The allocation of restoration resources should be reevaluated by the Trustee Council and a more equitable plan created to "restore" the area impacted by this release. Areas outside of the 17-miles impacted by the spill should be substantially reduced or eliminated from the plan.

> *"The Oil Pollution Act of 1990, and other applicable laws, require the TC to use the Natural Resource Damage money for restoring, replacing, rehabilitating, and/or acquiring the equivalent of natural resources injured, and services lost, as a result of the Spill." (Page 8, Scoping Document)*
>
> *"Projects that restore rehabilitate, replace, enhance, or acquire the equivalent of the same or similar resources or services injured by the spill are preferred to projects that benefit other comparable resources or services. On-site and in-kind restoration projects are preferred but not required." (Page 9, Scoping Document)*

3. Assuming that 815 birds were destroyed seven-years ago, why is the largest portion of this settlement being spent on habitat restoration? The Western Snowy Plover population at the most heavily impacted area at Surf/Ocean Beach has increased substantially (see VAFB monitoring reports 1998-2003) without any restoration activity other than immediate cleanup since the release.

"Between 635 and 815 seabirds and shorebirds are estimated to have been impacted by the Spill. This estimate includes 92 dead birds that were recovered, 32 birds that died in the rehabilitation center, and 18 birds that were rehabilitated and released." (Page 6, Scoping Document)

4. Project #1, Table #1 on page 11 should be reduced in scope. The project location should be modified to say "Coastline from Minuteman Beach to Boathouse Beach at VAFB" to be consistent with the requirements of the Oil Pollution Act of 1990.

5. Approximately $65,000 has been allotted for projects 5-9 on Table #1 on page 11.

"In addition, the Trustees are interested in other project concepts that members of the public believe are more cost effective or better meet the objective of restoring resources injured by the Spill and that better meet the project selection criteria set forth below." (Page 3, Scoping Document)

Any one of projects 5-9 may exceed the total allotted for all of them. There is a substantial amount of this settlement being allocated for projects outside the area impacted during the release. A reallocation of these funds could result in a greater benefit to the habitat that was impacted by the release.

6. Project #7 should be expanded to include an interactive interpretive center for the beach and estuary at Ocean Beach County Park. The estuary is the home to over 100 migratory birds and is an important learning laboratory for students of the Lompoc Unified School District and nearby Allan Hancock College.

Ronald L. Fink
1332 North E Court
Lompoc, CA 93436

SURF-OCEAN BEACH COMMISSION

401 East Cypress Avenue
Lompoc, Ca 93436
805 736 4005

November 22, 2004

Ms. Melissa Boggs-Blalack, Environmental Scientist
California Department of Fish and Games
Oil Spill Prevention and Response
213 Beach Street
Morro Bay, Ca 93442

The Surf Ocean Beach Commission is the product of a petition drive that drew over 6,000 signatories who requested that "something be done" to maintain public access to the area known as Surf-Ocean Beach. In the spirit of this effort the SOBC continues to support access to the beach while preserving the habitat.

The SOBC has provided docents at the entrance to Surf Beach during the Western Snowy Plover nesting season for the last several years. Our docents greet an average of 30,000 beach visitors each year during the 25-week nesting season. Greeting these visitors has given us a strong sense of what the public expects from their visit.

The SOBC feels strongly that the projects we have chosen to support will have a positive and immediate impact on Surf Beach, Ocean Park and the estuary. Constructing a boardwalk will direct people away from the habitat, educating our youth and visitors to the beach will increase public awareness and habitat improvements will aid the various animal, bird and crustacean populations along the coast.

The SOBC is committed to maintaining continued public access to Surf and Ocean Park beaches. The SOBC recognizes that humans are part of the habitat and therefore they must consider other creatures during recreational visits to nature.

The Platform Irene oil release in 1997 created some short-term damage to about 17-miles of the shoreline on Vandenberg AFB. The impact of the oil spill was cleaned up in a few weeks and the habitat has recovered substantially without any further human intervention. Federal law required the operators of the platform to compensate "the public" for damages created by the release. A fund of about $3-million is now available for restoration efforts.

The Platform Irene Trustee Council recommended several projects and the SOBC generally supports the concept the TC has embodied in the scoping document. Habitat improvements generally create a considerable cost burden and are difficult to measure while physical improvements such as an interpretive center or boardwalk are readily visible and make an immediate impact. The settlement fund offers a unique opportunity to improve both the habitat and public access.

The SOBC feels that projects directly impacted by the spill should receive a higher priority and funding should be allocated to projects that directly benefit Surf and Ocean Park beaches and the surrounding communities.

Attached is a matrix of projects and funding estimates that the SOBC feels is reasonable and achievable within a short (5-year) timeframe. The matrix is prioritized with our most important recommendation at the top. What follows is the SOBC concept of each project on the matrix:

1. **Access to Ocean and Surf Beach**

(1) (a) Construct a wheelchair accessible boardwalk with turnouts from the concrete steps west of the railroad trestle at Ocean Park to the area below Surf Station (b) Construct an avian viewing platform at Ocean Park (c) Erect interpretive signs at the edge of the Santa Ynez River estuary. This boardwalk should be located between the sand dunes and the high water mark so that people could easily walk from Ocean Park to Surf Beach. (2)

New Project

An example of the kind of boardwalk we envision is currently located at Guadalupe Park.

This project includes the addition of temporary "snow fencing" from the concrete steps west of the Union Pacific railroad trestle at Ocean Park to channel the public past the WSP nesting area to allow beach access, protect nesting areas and provide safe access to the beach. This project would substantially reduce the hazard to the public that is created by having people crossing over the Union Pacific Railroad tracks at Surf.

Santa Barbara County currently has a project in development for an avian viewing platform in the estuary. A partnering arrangement between the TC and SBC will create highly visible and immediate impact in Ocean Park.

2. **Eradicate Ice Plant and European Beach Grass In The Dune Areas.**
This project has long been advocated as a means of improving the WSP nesting habitat. The impact of ice plant and European beach grass removal on the habitat will not be fully understood until it is completed. The SOBC supports this project but there may be some adverse impacts to the UPR right-of-way if the resulting loose sand is not contained during windy conditions. The best example of this impact is demonstrated about 75' south of the entrance to Surf Beach where a minor "dune" is created across the UPR tracks each year.

3. **Construct an Interactive Interpretive Center Near the Restrooms at Ocean Park.**
This would provide a venue for local environmental advocacy groups (Sierra Club, Audubon, Etc) to teach children and beach visitors about the importance of the estuary and the seashore. This project would include a 2,500 square foot building with various alcoves and infrastructure to host interactive displays by the Cabrillo High School aquarium, Allan Hancock College biology department, Vandenberg AFB and the County of Santa Barbara.

New project

Initially the exterior of the building will be used for "self-guided" tours with brochures, signage and telescopes that will establish a presence at the site. As the project matures local schools and colleges, citizen groups or bird enthusiasts may develop interior display areas within the alcoves and/or interactive display stations. The SOBC anticipates that local environmental advocacy groups will provide volunteer "guides" at the center and that SBC will maintain the structure.

A Coastal Resources Enhancement Fund (CREF) grant totaling $60,000, which was championed by the SOBC and the 4th District County Supervisor, has been allocated to start the design of this project. A partnering arrangement between the TC and SBC will ensure that this project is completed.

4. **Contribute Funding to Educational Programs.**
   Funds should be contributed to Cabrillo High School Aquarium, a part of the Lompoc Unified School District and the Allan Hancock College biology program. Nurturing these programs will serve to educate local youth and adults on the merits of sound environmental stewardship and showcase the Surf Beach, Ocean Park and estuary areas for their educational value. The Cabrillo aquarium program specifically targets high school students and has received high praise from the scientific community throughout the world.

New project

5. **Point Sal Project.**
   The SOBC strongly feels that the project at Point Sal is not practical and should be eliminated from consideration. The road leading to the site has been impassible for at least 10-years and probably will not be reconstructed due to environmental concerns and cost limitations. Expending money in this area would be of no benefit.

The SOBC looks forward to working with the Platform Irene Trustee Council as projects are planned and brought to fruition. The benefits of this process have the potential of improving the habitat **AND** increasing public access at Surf and Ocean Park beaches, while maintaining the highest environmental standards.

We trust you will look at our priority ranking of projects favorably. We look forward to participating in your future workshops and meetings.

Should you have any questions, please feel free to contact me at 805 736 4005.

Sincerely,

Alice Milligan, Chair
Surf/Ocean Beach Commission

Dick DeWees, Mayor
City of Lompoc & Member SOBC

Susan Warnstrom
Susan Warnstrom, Member SOBC

Ron Fink, Member SOBC

Florence Pata, Member SOBC

SURF OCEAN BEACH COMMISSION
PROPOSED PRIORITIES/FUNDING DISTRIBUTION

Project	Description	Location	Resource Benefits	Nexus	Proposed allocation
Boardwalk (Ocean Park to Surf Station Beach)	Construct wheelchair accessible boardwalk from RR track trestle crossing at Ocean Park to Surf beach. Construct viewing platform at the estuary parking area. Erect "snow fencing" on the beach.	Ocean Park and Surf station.	Provides handicapped access & reduces foot traffic in Snowy Plover nesting areas. Improved access for bird watching in the Santa Ynez River estuary.	Both human recreational uses and Snowy Plovers were impacted by the Spill.	$650,000
Sandy Beach & Dune Habitat Restoration	Eradicate ice plant & European beach grass, & Re-plant native vegetation.	Surf Beach & Wall Beach.	Improvements to Beach/dune ecosystem & Snowy Plover nesting.	Both sandy beaches and Snowy Plovers were impacted by the Spill.	$450,000
Interactive interpretive center – Ocean Park.	Interactive interpretive center in to be used as a venue for public education efforts.	Ocean Beach park.	Provides environmental, wildlife, and habitat educational signage and host interpreter facilities.	Both human recreational uses and Snowy Plovers were impacted by the Spill.	$325,000
Support local educational programs.	Provide funding for research projects and community outreach programs.	Cabrillo HS & Allan Hancock College	Provides environmental, wildlife, and habitat educational opportunities.	Educates the public on the merits of environmental stewardship.	$200,000
Total					**$1,625,000**

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
Pacific OCS Region
770 Paseo Camarillo
Camarillo, California 93010-6064

7300

DEC - 1

Ms. Melissa Boggs-Blalack, Environmental Scientist
California Department of Fish and Game
Oil Spill Prevention and Response
213 Beach Street
Morro Bay, CA 93442

RE: Comments on the Torch/Platform Irene Oil Spill Scoping Document for Restoration Planning

Dear Ms. Boggs-Blalack:

MMS appreciates this opportunity to comment on the restoration projects proposed in this document. Having been involved in the spill response and NRDA meetings, we are interested to see that these projects are initiated as soon as practicable.

1. Seabirds

We would like to see augmentation of enforcement of fines for harassment added to the project. We agree with the need to "Monitor public compliance", particularly in these fairly remote sections of coastline, as a key approach to reducing the impacts to seabirds and increasing nesting opportunities.

2. Dune Habitat

We agree in general with this project as a fairly direct way to compensate for impacts to the snowy plover. The key to the success of this project is establishing a long-term monitoring of eradicated sites to keep the non-native plants out. We agree that a 10 year monitoring effort is needed to ensure benefits to the population. If budget is constrained, it would be preferred to restore a smaller portion of habitat and monitor it multiple years than to restore a larger habitat and monitor it for a couple of years only.

3. (4) Black Abalone

We do not support funding the Black Abalone restoration project proposed.

Though black abalone were directly impacted by the spill south of Surf, restoration of the population through outplanting is still not appropriate due to current techniques and may further hinder recovery of the population. There are too many factors which limit the success of this project. Black abalone cannot to date be spawned in the lab and there is insufficient information to determine if the genetics of northern populations are similar enough to be outplanted along the Central Coast. There are no data supporting resistance of abalone to the disease and it is also not known if abalone would successfully reoccupy habitat which has since been repopulated by urchins, sponges, algae and other invertebrates.

Before any outplanting can be considered, a successful laboratory spawning effort and extensive genetics work on the current population is needed to determine whether such efforts would help or further hinder the population's recovery.

Suggested Abalone/intertidal resources project:

A project which would mitigate impacts to black abalone and also mitigate impacts to other impacted shoreline resources would be reducing both legal and illegal collecting pressure on rocky intertidal species along the Central Coast. The project could evaluate and pursue means to reduce collecting pressure by 1) reducing legal take where appropriate (e.g., lower catch limits), 2) limiting access to particular areas, 3) enforcing fines for illegal take of abalone, protected species, and species in areas designated as reserves, and 4) increasing educational efforts to reduce harvesting by the public. It is recognized that the area affected directly affected by the spill enjoys some measure of protection due to limited access by the public on VAFB, and so the project area might need to include areas to the north and south of the impact zone to provide true value to the species.

New project

5. Mussels

MMS supports the Mussel Restoration project. As originally proposed, this project includes doing genetics on the platform mussels first to ensure that transplanting these mussels is appropriate onshore. Because it involves transplanting mussels from the platforms, healthy mussel beds onshore would not be affected. There are ample field results from similar projects to expect a high success from transplanting. Both juveniles and adults would need to be transplanted in this experiment to determine appropriate size and age needed for good recovery. Long-term MARINe data on mussel recruitment and long term trends at VAFB will aid the design and analysis of this project.

6. Human Recreational Projects

These projects are meant to compensate for human use impacts where the spill occurred. We agree with those projects that highlight public information and improvements for existing, accessible locations. As written, the Ocean and Surf Beach projects emphasize education rather than recreation/access and seem to balance the need to mitigate recreational impacts with the detrimental impacts posed by increasing public use of those locations. However, we do not support funding the Point Sal land acquisition and improvement projects. The Point Sal projects are meant to provide accessibility where it is now non-existent or limited. If there is greater access to Point Sal, as the projects are written, the public would likely cause new impacts to unprotected resources due to the increased use. It would be contradictory to use impact restoration funds for projects that will likely result in impacts.

If you have any questions or comments, please contact Mary Elaine Dunaway at 805-389-7848.

Sincerely,

Lynnette L. Vesco

Lynnette L. Vesco, Chief
Office of Environmental Evaluation

From: "Kathie Matsuyama" <kathiem@special-places.org>
To: <mboggs@OSPR.DFG.CA.GOV>
Date: Wed, Dec 15, 2004 4:12 PM
Subject: Torch/Platform Irene Oil Spill Scoping Document Comments

New project
Guadalupe Exotics
Species Removal

Hi Melissa:

Thank you for the opportunity to comment on the Torch/Platform Irene Oil Spill Scooping Document for Restoration Planning. I would like to request that an additional project site be considered in the draft restoration plan. The Scoping Document describes in Table 1 "Summary of Proposed Restoration Project Concepts" , project 2 "Sandy Beach & Dune Habitat Restoration" to involve eradication of iceplant and European beach grass and the replanting of native vegetation. These activities are proposed to occur, per the Scoping Document, at Surf Beach and Wall Beach. This project was proposed due to the strong nexus between the sandy beaches, Snowy Plovers and the Spill.

The additional location I request be considered in the draft restoration plan is the Guadalupe-Nipomo Dunes Complex. Eradication of iceplant and European beach grass has been underway in the 21,000 acre Dunes Complex since 1999. Since 1999, the 420 acres of weeds have been treated with over 10,000 hours on the ground. In 2004, about 200 acres were treated.

The project location will:

1. Restore and enhance similar resources injured by the spill.

2. There are no known adverse impacts to the project location.

3. A successful track record includes over 420 acres of invasive plants treated since 1999. A quantitative monitoring protocol for invasive species treatment has been established at the Dunes Complex to evaluate the success of the project and enable implementation of adaptive management strategies. Monitoring protocols for the Guadalupe-Nipomo Dunes were developed in 2003 to document the measurable changes within the habitat due to species specific exotic weed removal methods. Analysis of these changes is used to direct adaptive management decisions for future restoration projects. The protocols include monthly reports on weed eradication, bi-annual monitoring on the efficacy of weed treatment methods and presence of rare species populations, and annual reporting on lessons learned.

4. This project location will benefit both sandy beaches and Snowy Plovers in the fragile Guadalupe-Nipomo coastal dunes. Of California's original 13 coastal dune complexes, only four remain relatively intact. One of them is the 18-mile-long Guadalupe-Nipomo Dunes complex, a designated National Natural Landmark located north of Santa Barbara and south of San Luis Obispo. The type of natural resource to be benefited from this project location is extremely rare.

5. Invasive species removal is continually underway in the Dunes Complex. The time to provide benefits to the ecosystem would be immediate.

6. Eradication of the invasive is the long-term objective. This is achieved by annual follow-up in areas that have been treated in the past.

Thank you for considering the Guadalupe-Nipomo Dunes Complex as a project location for a restoration project in the Torch/Platform Irene Oil Spill Scoping Document for Restoration plan.

Kathie Matsuyama

New project Aquaculture proposal

December 17, 2004 E-mail

Hello Melissa,

It was nice to hear from you. Thank you for your call and I am delighted to offer my idea again concerning how some of the settlement money can be used to meet the criteria that was established. I will briefly explain here and if so desired I can also write up a more formal proposal with more detail etc.

Project Idea:

Establish a small scale restorative aquaculture center to enhance a locally important fish species that is under heavy fishing pressure and whose population is in decline.

Use the model that has been established by Scribbs Hubbs Sea World Research Center for the White sea bass and California halibut.

How This Idea Fills Criteria:

Feasibility: Very feasible. First need to identify species, let us say rockfish? Very important locally, I believe are in decline. Need to have outdoor, large open tanks to establish broodstock. Use existiting knowledge concerning the determined species.
During natural or hormone induced spawns, collect naturally fertilized eggs and stock into "nursery tanks" at low densities. Feed larval rockfish phyto/zoo plankton. Have tanks on a natural sea water flow too. I suggest not feeding commericially prepared foods. Simply release at a determined stage. (This is all subject to research and "comparing notes" with others.)

[I heard the other day out on Avila Pier that some fisherman found larval rockfish in the bait pen. I thought this was great. When I worked under Dr. Lavenberg of the Natural History Museum we had some success with larval halibut in pens.]

Restorative goals: This would increase number of larval rockfish open to predation as well as the number of rockfish open to survival. This would ultimately increase adult population levels in the wild. The larval rockfish would not have had the feeding behavior modified by commercial feed therefore would not be detrimental to wild rockfish etc.

Long Term Success: Very likely. Again refer to Scripp/Hubbs model for white sea bass. Monitor local rockfish habitats over time to determine population

increases.

How to determine success? Tag released fish and encourage local sport fisherman to report tag numbers to Fish and Game. I was heavily involved with a program similar to this in Santa Monica Bay with the local fisherman concerning our California halibut. Local fisherman tagged juvenile halibut then released them. Often they wer cought again miles away or close by months, weeks, later. It was awesome and incredibly successful. It created such good will between sports fisherman and Fish and Game. Something I do believe may be need here as well.

Keeping the money local: This idea would do it.

Exciting idea, won't you agree? I mentioned earlier this is a very condensed version and there is so much more to it. Briefly I would like to give my background to hopefully add a little validity to this. I worked under Dr. Kevin Hill, Dr. Kevin Herbinson and Dr. Robert Lavenberg at the Sea Lab located at the Southern California Edison Electric Generation Plant in Redondo Beach, California. I was involed in many things yet mainly the rearing of California halibut and studying the potential of ocean enhancement through releasing juvenile halibut.

I look forward to hearing from you. I can be reached at (805) 938-0076. My e-mail address is casazzafam4@aol.com. My home address is 1127 Jefferson Ct., Santa Maria CA 93455.

Thank you for your time and kind consideration of my idea.

Sincerely,

Kimberly Casazza

APPENDIX B

MAILING LIST FOR TORCH/PLATFORM IRENE OIL SPILL
DRAFT RESTORATION PLAN/ENVIRONMENTAL ASSESSMENT

Torch Mailing List of Interested Parties
Updated March 7, 2006

Federal

HQ AFSPC/CEV
Attn: Gary Mahr
Stop 7, Building 1
Peterson AFB, CO 80914-5000

Environmental Protection Agency
Region IX
EIS Review Section, WTR-8
75 Hawthorne Street
San Francisco CA 94105

US Fish and Wildlife Service
Ventura Field Office,
2493 Portola Road, Suite B
Ventura CA 93003

National Marine Fisheries Service
Southwest Regional Office
501 W. Ocean Blvd, Suite 4200
Long Beach CA 90802-4213

U.S. Army Corps of Engineers
Los Angeles District
Ventura Regulatory Office
2151 Alessandro Drive, Suite 255
Ventura, California 93001

Congresswoman Lois Capps
310 East Stowell Road, Ste 111
Santa Maria, CA 93454

Minerals Management Service
Attn: Mary Elaine Dunaway
770 Paseo Camarillo
Camarillo, CA 93010-6064

State

California Coastal Commission
Federal Consistency Review
45 Fremont Street, Suite 2000
San Francisco CA 94105-2219

California Department of Parks and Recreation
Office of Historic Preservation
PO Box 942896
Sacramento CA 94296-0001

California Department of Fish and Game
1416 9th Street
Sacramento CA 95814

California Regional Water Quality Control Board
Central Coast Region
81 Higuera Street, Suite 200
San Luis Obispo CA 93401-5414

CALTRANS, District 5
50 Higuera Street
San Luis Obispo, CA 93401-5415

Office of the Governor
Office of Planning and Research
State Clearinghouse
1400 10th Street, Room 121
Sacramento CA 95814

Local

CUPA
Santa Barbara County Fire Dept.
Protection Services Division
Hazardous Materials Unit
Attn: Ann Marie Nelson
4410 Cathedral Oaks Road
Santa Barbara Ca 93110-042

Santa Barbara County
Board of Supervisors, Chairperson
105 East Anapamu Street
Santa Barbara CA 93101-2000

Santa Barbara County
Supervisor Brooks Firestone
105 East Anapamu Street
Santa Barbara, CA 93101-2000

Supervisor Joni Gray
401 E Cypress Avenue
Lompoc CA 93436

Santa Barbara County
Department of Planning & Development
Attn: Project Review
123 East Anapamu Street
Santa Barbara CA 93101-2058

Santa Barbara County Air Pollution Control District
Attn: Project Review
26 Castilian Drive, Suite B-23
Goleta CA 93117

Santa Barbara County Environmental Health Services
Project Review
120 Cremona Drive, Suite C
Goleta CA 93117

Santa Barbara County
Park Department
Attn: Terri Maus-Nisich
610 Mission Canyon
Santa Barbara CA 93105

Santa Barbara County
Park Department
300 Goodwin Road
Santa Maria CA 93455

Santa Barbara County
Public Works Department
Attn: Matt Dobberteen
123 E Anapamu Street
Santa Barbara CA 93101

City of Lompoc
Environmental Planning Department
P.O. Box 8001
100 Civic Center Plaza
Lompoc CA 93438-8001

Santa Maria City Council
110 East Cook Street
Santa Maria CA 93454-5190

Santa Ynez Chumash Indian Reservation
Tribal Elders Council
P.O. Box 365
Santa Ynez CA 93460

Citizen's Planning Association
Attn: John Buttny
916 Anacapa Street
Santa Barbara CA 93101

Stroub Construction, Inc.
Robert Mhyre
5256 S Mission Rd #310
Bonsall CA 92003

Nick Obermire
535 South L St
Lompoc CA. 93436

William Fedasko
1569 Calle Portos
Lompoc CA 93436

Ron Fink
1332 North E Court
Lompoc CA 93436

The Audubon Society
PO Box 2045.
Lompoc CA. 93438

Lompoc Public Library
3755 Constellation Rd
Lompoc CA, 93436

Lompoc Public Library
601 East North Avenue
Lompoc CA 93436-3406

Santa Maria Public Library
420 South Broadway
Santa Maria CA 93454-5199

Santa Barbara Public Library
40 East Anapamu Street
Santa Barbara CA 93101-2000

University of California, Santa Barbara
Library
Government Publications Department
Santa Barbara CA 93106-9010

Environmental Defense Center
906 Garden Street, Suite 2
Santa Barbara CA 93101-1415

Urban Creeks Council
P.O. Box 1083
Carpinteria CA 93014

UC Santa Barbara
Dept of Ecology, Evolution and Marine Biology
Attn:Mark Holmgren
Santa Barbara Ca 93106-4610

Jorden Brother's Ranch
P.O. Box 427,
Lompoc CA 93436

Farm Bureau
423 North G Street
Lompoc CA, 93436

Audubon Society of Santa Barbara
300 N Los Carneros
Goleta Ca 93117

Jim Greaves
327 W Islay St
Santa Barbara CA 93101

Santa Barbara County Farm Bureau
Box 1846
Buellton CA 93427

Surf Ocean Beach Commission
401 East Cypress Avenue
Lompoc, CA 93436

Alice Milligan, President
Lompoc Valley Chamber of Commerce and Visitors Bureau
P.O. Box 626
Lompoc CA, 93438-0626

Sierra Club
Conservation Chairperson
PO Box 90924
Santa Barbara CA 93190

Sierra Club Arguello Group
Box 333
Lompoc CA 93436

California Trout
Central Coast Region
435 El Sueno Road,
Santa Barbara CA 93110

Santa Barbara Museum of Natural History
Attn: Library Curator
2559 Puesta del Sol Road
Santa Barbara Ca 93105-2936

Mr. John Roskoski
530 South K St
Lompoc CA 93436

Vandenberg Library (not the tech lib)

Carl Walton
616 North Tenth Street
Lompoc CA 93436

Scott Martinson
Ocean Beach Alliance
319 South F Street
Lompoc CA 93436

Alice McCurdy
Energy Division
1226 Anacapa Street
Santa Barbara CA 93101 Phone 568-2542

Jim Watkins
Arcata Fish and Wildlife Office
1655 Heindon Road
Arcata, California 95521

Channel Islands National Marine Sanctuary
Anne Walton, Management Plan Specialist
113 Harbor Way
Santa Barbara CA 93109

State Lands Commission
Dwight Sanders,
Division Chief Environmental Planning
100 Howe Ave Suite 100 South
Sacramento CA 95825-8202

Heal The Ocean
Hilary Houser
P.O. Box 90106
Santa Barbara CA, 93190

Gaviota Coast Conservancy
P.O. Box 1099
Goleta CA 93116

Bixby Ranch
???

Brian Trautwein
4280 Calle Real, #46
Santa Barbara, CA 93110

Corrine Ardoin
930 East Boone St.
Santa Maria, CA 93454

Charles Blair
176 Alcor Ave
Lompoc CA 93436

Jon C. Picciuolo
445 Oak Hill Terrace
Lompoc, CA 93436

Jeremy Chase
816 North O Street #62
Lompoc CA 93436

Brian Lane
223 South A St
Lompoc, CA 93436

Janis Carrithers
232 North F St
Lompoc CA 93436

Robin Dunaetz
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Lompoc CA, 93436

Roger Mann
P.O. Box 226
Los Alamos CA 93440

Linda Hanes
P.O. Box 754
Sebastopol, CA 95473

Becky Deutsch
422 Tupelo Court
Santa Maria, CA 93455

Nick Obermire
535 South L St
Lompoc CA. 93436

William Fedasko
1569 Calle Portos
Lompoc CA 93436

Vandenberg Village Assoc
3875-F Constellation Road
Lompoc CA 93436

Santa Maria Times
PO Box 400
Santa Maria CA 93454

Center For Marine Conservation
120 W Mission St
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Mary Ellen & Chris Brooks
718 St Andrews Way
Lompoc CA 93436

Melinda Burns
Santa Barbara News Press
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Santa Barbara CA 93101

J Andrew Caldwell
COLAB
PO Box 7523
Santa Maria CA 93456

Lois Capps
22nd Congressional District
1428 Chapala Street
Santa Barbara CA 93101

Diane Conn
Get Oil Out
PO Box 23625
Santa Barbara CA 93121

Bill Denneen
Friends of Pt Sal
1040 Cielo Lane
Nipomo CA 93444

Virginia Gardiner
Calif Dept of Parks & Recreation
1933 Cliff Dr Suite 27
Santa Barbara CA 93109

Connie Hannah
SB League of Women's Voters
5194 Calle Asio
Santa Barbara CA 93111

John Hankins
County News Clipping Service
1056 Eugenia Place 'A"
Carpinteria CA 93013

Greg Helms
League of Conservative Voters
PO BOX 702
Santa Barbara CA 93102

Joyce Howeton
335 South H Street
Lompoc CA 93436

Susan Jordan
League For Coastal Protection
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